

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Application of)	
)	
HAWAIIAN ELECTRIC COMPANY, INC.)	DOCKET NO. 2020-0136
)	
For Approval of Energy Storage)	
Power Purchase Agreement for Energy)	
Storage Services with)	
Kapolei Energy Storage I, LLC.)	
_____)	

DECISION AND ORDER NO. 37754

TABLE OF CONTENTS

I.	BACKGROUND	8
A.	Procedural History.....	8
B.	Parties To The ESPPA.....	15
C.	The Project.....	16
D.	Material Terms Of The ESPPA.....	18
II.	PARTIES' AND PARTICIPANT'S POSITIONS	29
A.	Hawaiian Electric.....	29
B.	The Consumer Advocate.....	38
C.	Kapolei Energy Storage I.....	43
D.	Hawaiian Electric Reply.....	44
1.	Response to Consumer Advocate.....	44
2.	Response to Kapolei Energy Storage I.....	49
III.	DISCUSSION	49
A.	Legal Authorities.....	49
B.	Procurement Of The ESPPA.....	51
C.	Addressing The ESPPA.....	54
1.	Material ESPPA Terms And Conditions.....	59
a.	Pricing Provision	59
b.	ESPPA Duration	68
c.	Curtailment	70
d.	Nature Of The ESPPA	72
2.	Land Use.....	82
3.	Greenhouse Gas Emissions.....	85
a.	GHG Emissions Analysis	87
b.	End Of Life Treatment	92
4.	Community Outreach.....	95
5.	Permitting and Approvals Needed from Other Government Agencies.....	99

D.	Hawaii's Energy Policy Statutes.....	104
1.	Contribution To State Energy Goals.....	105
2.	HRS § 269-6.....	106
E.	Conditions Of Approval.....	108
1.	Addressing the Consumer Advocate's Proposed Conditions.....	128
F.	Recovery Of ESPPA-Related Non-Energy Payments Through The PPAC.....	134
G.	Accounting And Ratemaking Treatment For Purchase Power Expenses Under The ESPPA.....	135
H.	Remainder Of The Proceeding.....	136
IV.	SUMMARY OF FINDINGS OF FACT AND CONCLUSIONS OF LAW	138
V.	ORDERS	139

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DECISION AND ORDER

By this Decision and Order,¹ the Public Utilities Commission ("Commission"), subject to the conditions set forth

¹The Parties in this Docket are HAWAIIAN ELECTRIC COMPANY, INC. ("Hawaiian Electric" or "Company") and the DIVISION OF CONSUMER ADVOCACY ("Consumer Advocate"), an ex officio party, pursuant to Hawaii Revised Statutes ("HRS") § 269-51 and Hawaii Administrative Rules ("HAR") § 16-601-62(a). Additionally, the Commission granted participant status to KAPOLEI ENERGY STORAGE I, LLC ("Kapolei Energy Storage I" or "Seller"), pursuant to Order No. 37427, "(1) Granting Kapolei Energy Storage I, LLC's Motion to Participate; (2) Approving Hawaiian Electric Company, Inc.'s Request to Bifurcate Its Energy Storage Power Purchase Agreement-Related Requests From Its Interconnection-Related Requests; and (3) Adopting a Procedural Order to Govern the Energy Storage Power Purchase Agreement-Related Requests," filed on November 6, 2020 ("Order No. 37427"). The conditions imposed in this Decision & Order that apply to Kapolei Energy Storage I, discussed in detail below, are intended to apply to any new owner of, or successor to, Kapolei Energy Storage I, should ownership of the project change hands during the term of the ESPPA (but see Condition No. 6, discussed in Section III.E. below, regarding the prohibition against affiliate relationships related to the Project).

herein: (A) approves the Energy Storage Purchase Power Agreement ("ESPPA") between Hawaiian Electric and Kapolei Energy Storage I, dated September 11, 2020, for a 185 megawatt ("MW"), 565 megawatt hour ("MWh") battery energy storage system ("BESS") to be located in Kapolei on the island of Oahu ("Project"); (B) approves Hawaiian Electric's request to include all non-energy payments under the ESPPA, including the Lump Sum Payments (as defined in the ESPPA) and related revenue taxes, through the Purchased Power Adjustment Clause ("PPAC"), to the extent such costs are not included in the base rates; and (C) approves the proposed accounting and ratemaking treatment for the purchased power expenses under the ESPPA. The Commission's rulings and conditions are discussed herein.

In summary, the Commission is approving this Project to provide further assurance that the "lights will stay on" during the retirement of the AES coal plant in 2022 and future retirements of aging fossil-fueled plants in the next several years. However, despite the Commission's multiple admonitions to utilize standalone storage fueled by fossil fuels as a last resort, Hawaiian Electric appears to continue ignoring the high costs of this Project and attendant risks of further dependence on fossil fuel by their representations throughout this docket, including the responses to the Commission's concerns raised in recent status conferences and orders in this docket.

Ultimately, the Commission concludes that the continuation of reliable service following the scheduled retirement of the AES coal plant is of paramount concern and represents a significant public interest. In furtherance of this, the Commission finds that the Project's role in bridging this near-term gap in service supports its approval. That being said, as noted above, the urgency of this situation is largely a byproduct of Hawaiian Electric's willful disregard of the Commission's guidance and presents a number of concerning impacts to ratepayers. As a result, to ensure that the customer benefits associated with the Project that have been promised by Hawaiian Electric throughout this proceeding are realized, the Commission is imposing a number of conditions, summarized below and described in detail in Section III.E., to address the significant Project costs and redirect Hawaiian Electric to focus on maximizing benefits from the Project as a bridge to a reliable, clean energy future.

The Commission is requiring the following conditions of approval in this Order:

1. Condition No. 1: Hawaiian Electric shall forgo any potential recovery of the second allocation of the Performance Incentive Mechanism ("PIM") awards for the Stage 1 Oahu projects. Hawaiian Electric shall forgo any potential recovery of the second allocation of the PIM awards for the Stage 1 Oahu projects, and

shall not seek to collect any second allocation of the Stage 1 PIM awards for those projects.

2. Condition No. 2: Unlocking Grid Constraints and Aligning Demand-Side Programs with the Project. Hawaiian Electric shall unlock grid constraints and align demand-side programs with Project operations as follows:

- a. Remove requirements for energy storage on Phase 2 Community-Based Renewable Energy ("CBRE") projects on Oahu;
- b. Expand the available capacity for Phase 2 CBRE projects; and
- c. Remove daytime export restrictions for existing and new distributed energy resources ("DER") programs under consideration in Docket No. 2019-0323 and related opportunities.

3. Condition No. 3: Financial Retirement of Waiau and Kahe Units. Hawaiian Electric shall financially retire the following fossil units by the foregoing dates certain:

- a. Waiau Units 3 and 4 - no later than December 31, 2023;
- b. Waiau Units 5 and 6 - no later than December 31, 2026; and
- c. Kahe Units 5 and 6 - no later than December 31, 2028.

4. Condition No. 4: Monthly Reports on Renewable Generation Utilization. Hawaiian Electric shall file monthly reports with the Commission in this docket, with service to the Consumer Advocate, within 30 days of the end of each full month from the Project's date of commercial operation, that provide details regarding the Project's renewable energy utilization for the month. This report shall include, at a minimum:

- a. The percentage of the energy stored in the Project that was generated by fossil fuels, compared to the percentage generated by renewable resources;
- b. The average daily energy capacity (expressed as a percentage of maximum capacity) by which the BESS was charged; and
- c. The average daily energy capacity (expressed as a percentage of maximum capacity) by which the BESS was dispatched and/or utilized.

5. Condition No. 5: Minimum Renewable Utilization Thresholds and Prudence Review. To ensure that the Project delivers its purported benefits, the Commission establishes minimum thresholds of renewable utilization for the Project, such that in any year that Hawaiian Electric's utilization of the Project falls below the established thresholds, detailed below, an automatic prudence review of the fossil fuel costs incurred to charge the Project during this period will occur.

6. Condition No. 6: Prohibition on Affiliate Relationships with the Project. Any relationship by an affiliate of Hawaiian Electric to the Project during the term of the ESPPA is strictly prohibited.

7. Condition No. 7: Additional Reporting Requirements.
Hawaiian Electric shall file the following:

- a. Annual Utilization Report - Beginning with the first full calendar year following the in-service date of the Project, Hawaiian Electric shall file an Annual Utilization Report that includes the following:
 - (1) quantification of the generation source charging the Project in each hour of the year;
 - (2) co-optimization of the Project with other capacity resources, such as solar plus storage projects and grid services from DERs;
 - (3) the number of events triggering the FFR resource, including description of each event (generation trip, etc.) and system frequency response after each event;
 - (4) summary of actual curtailment data; and
 - (5) reporting on metrics identified by the Commission to review performance which requires Hawaiian Electric to unlock grid

constraints and align demand-side programs with Project operations.

b. Missed Guaranteed Project Milestones Report - Within 25 days of any missed Guaranteed Project Milestone ("Milestone"), Hawaiian Electric shall file in this docket a report of:

- (1) the Milestone missed;
- (2) the reason(s) why the Milestone was missed;
and
- (3) measures Hawaiian Electric believes will address the delay, including preventing similar delays for the same or other projects in the future.

8. Condition No. 8: End-of-Life Management Plan.

Hawaiian Electric shall work with Kapolei Energy Storage I to submit an end-of-life management plan for the Project, which shall be due within five years of this Decision & Order ("D&O").

9. Condition No. 9: Return to Ratepayers of Daily Delay Damages ("DDD's"). To the extent that DDDs are paid to Hawaiian Electric prior to commencement of the Lump Sum Payment, Hawaiian Electric shall credit the amount of the DDDs received to its ratepayers through the PPAC.

I.

BACKGROUND

A.

Procedural History

On September 15, 2020, Hawaiian Electric filed its Application requesting approval of the ESPPA, among other things.²

On October 5, 2020, Kapolei Energy Storage I filed a Motion to Participate in this proceeding.³

On October 22, 2020, the Commission issued Protective Order No. 37389 to govern the production and exchange of confidential information in this docket.⁴

On November 6, 2020, the Commission filed Order No. 37427, which granted Kapolei Energy Storage I's Motion to Participate and set forth a statement of issues for this proceeding, as follows:

1. Whether Hawaiian Electric has met its burden of proof in support of its request for approval of the ESPPA between Hawaiian Electric and Kapolei Energy Storage I, dated September 11, 2020, for 185 MW/565 MWh

²"Hawaiian Electric Company, Inc.'s Application; Exhibits 1-9; Verification," filed on September 15, 2020 ("Application"), at 1.

³"Kapolei Energy Storage I, LLC's Motion to Participate; Affidavit of Robert Rudd; and Certificate of Service," filed on October 5, 2020 ("Motion to Participate").

⁴Order No. 37389, "Protective Order," filed on October 22, 2020.

2. lithium-ion BESS, proposed to be located in Kapolei, on the island of Oahu.
 - a. Whether Hawaiian Electric's purchased power arrangements under the ESPPA, pursuant to which Hawaiian Electric will dispatch energy on an availability basis from Kapolei Energy Storage I and pay fixed Lump Sum Payments to Kapolei Energy Storage I, are prudent and in the public interest, with explicit consideration under HRS § 269-6, of the effect of the State's reliance on fossil fuels on price volatility, export of funds for fuel imports, fuel supply reliability risk, and greenhouse gas emissions;
3. Whether Hawaiian Electric has met its burden of proof in support of its request to include all other payments for energy and non-energy under the ESPPA, including the Lump Sum Payment (as defined in the ESPPA) and related revenue taxes, through the PPAC, to the extent such costs are not included in base rates;
4. Whether Hawaiian Electric has met its burden of proof in support of its request for its proposed accounting and ratemaking treatment for the purchased power expenses under the ESPPA; and
5. Whether it is in the public interest for the 138 [kilovolt ("kV")] line extension, required to interconnect the Project to Hawaiian Electric's system, to be constructed above the surface of the ground pursuant to HRS § 269-27.6(a) and (b).⁵

Order No. 37427 also bifurcated Hawaiian Electric's ESPPA-related requests (Issue Nos. 1-4) from its above-ground 138 kV line extension-related requests (Issue No. 5) and

⁵Order No. 37427 at 16-17.

established a procedural schedule governing Hawaiian Electric's ESPPA-related requests.⁶

Pursuant to Order No. 37427, the Consumer Advocate issued information requests ("IRs") to Hawaiian Electric and Kapolei Energy Storage I,⁷ to which Hawaiian Electric and Kapolei Energy Storage I submitted their responses.⁸ On February 3, 2021, the Commission issued IRs to Hawaiian Electric and Kapolei Energy Storage I, to which Kapolei Energy Storage I and Hawaiian Electric also responded on February 10, 2021.⁹

⁶Order No. 37427. The Commission also noted its intent to issue a separate procedural order to govern Hawaiian Electric's above-ground 138 kv line extension-related requests, as needed, following its consideration of Hawaiian Electric's ESPPA-related requests. Id. at 8.

⁷"Division of Consumer Advocacy's Submission of Information Requests," filed on December 31, 2020.

⁸"Kapolei Energy Storage I, LLC's Response to Consumer Advocacy's Information Requests, CA/KES-IR-1 to CA/KES-IR-11, Filed December 31, 2020; Attachment A; Exhibit A; Exhibits 1-4," filed on January 7, 2021; Letter From: K. Katsura To: Commission Re: Docket No. 2020-0136, Hawaiian Electric Energy Storage Power Purchase Agreement for Energy Storage Services with Kapolei Energy Storage I, LLC; "Responses to Consumer Advocate Information Requests, filed on January 7, 2021." IRs issued by the Consumer Advocate and Responses thereto are referenced in this D&O as follows: IRs from the Consumer Advocate to Hawaiian Electric and Responses to IRs: "CA/HECO-IR-__" and "Hawaiian Electric Response to CA/HECO-IR-__"; IRs from the Consumer Advocate to Kapolei Energy Storage I and Responses to IRs: "CA/KES-IR-__" and "Kapolei Energy Storage I Response CA/KES-IR-__."

⁹"Kapolei Energy Storage I, LLC's Response to Commission's Information Requests, PUC-KES-IR-101 to PUC-KES-IR-104, Issued February 3, 2021; Exhibits "A" - "B"; and Certificate of Service,"

On February 8, 2021, Kapolei Energy Storage I filed its Statement of Position ("SOP"), consistent with Order No. 37427.¹⁰

Additionally, on February 8, 2021, the Consumer Advocate submitted a Motion for Enlargement of Time, seeking an extension of time to file its SOP and for Hawaiian Electric to file its Reply SOP.¹¹ On February 11, 2021, the Commission issued Order No. 37618, in which the Commission granted the Consumer Advocate's Motion and amended the procedural schedule.¹²

On February 12, 2021, the Consumer Advocate filed its SOP, consistent with Order No. 37618.¹³

filed on February 10, 2021; Letter From: K. Katsura To: Commission Re: Docket No. 2020-0136, Hawaiian Electric Energy Storage Power Purchase Agreement for Energy Storage Services with Kapolei Energy Storage I, LLC; "Responses to Commission Information Requests," filed on February 10, 2021. Responses to the Commission's IRs are referenced in this D&O as follows: "Kapolei Energy Storage I Response to PUC-KES-IR-__"; and "Hawaiian Electric Response to PUC-CA-IR-__".

¹⁰"Kapolei Energy Storage I, LLC's Statement of Position; Affidavit of Robert Rudd; and Certificate of Service," filed on February 8, 2021 ("Kapolei Energy Storage I SOP").

¹¹"Division of Consumer Advocacy's Motion for Enlargement of Time," filed on February 8, 2021.

¹²Order No. 37618, "Granting the Division of Consumer Advocacy's Motion for Enlargement of Time," filed on February 11, 2021.

¹³"Division of Consumer Advocacy's Statement of Position," filed on February 12, 2021 ("Consumer Advocate SOP").

On March 4, 2021, Hawaiian Electric filed its Reply SOP, consistent with Order No. 37618.¹⁴

The Commission issued IRs to Hawaiian Electric on March 5, 2021, and March 17, 2021, to which Hawaiian Electric responded on March 12, 2021,¹⁵ and March 24, 2021,¹⁶ respectively. Additionally, the Commission issued IRs to Kapolei Energy Storage I on March 11, 2021, to which Kapolei Energy Storage I responded on March 18, 2021.¹⁷

¹⁴"Hawaiian Electric Company, Inc.'s Reply Statement of Position; Exhibit A; and Certificate of Service," filed on March 5, 2021 ("Hawaiian Electric Reply SOP").

¹⁵Letter From: K. Katsura To: Commission Re: Docket No. 2020-0136, Hawaiian Electric Energy Storage Power Purchase Agreement for Energy Storage Services with Kapolei Energy Storage I, LLC; "Responses to Commission Information Requests," filed on March 12, 2021.

¹⁶Letter From: K. Katsura To: Commission Re: Docket No. 2020-0136, Hawaiian Electric Energy Storage Power Purchase Agreement for Energy Storage Services with Kapolei Energy Storage I, LLC; "Responses to Commission Information Requests," filed on March 24, 2021

¹⁷"Kapolei Energy Storage I, LLC's Response to Commission's Information Request, PUC-KES-IR-105 Issued March 11, 2021; Attachment A; Exhibit '1'; and Certificate of Service," filed on March 18, 2021.

On March 8, 2021, Kapolei Energy Storage I filed a Motion for Leave to File a Reply SOP, seeking to respond to the first and second recommended conditions to ESPPA approval, as proposed in the Consumer Advocate's SOP.¹⁸ The Commission granted Kapolei Energy Storage I's Motion for Leave on March 17, 2021, and made Kapolei Energy Storage I's Reply SOP a part of the record in this proceeding.¹⁹

On April 6, 2021, Hawaiian Electric filed a request seeking approval of the interconnection-related requests (Issue No. 4), which were bifurcated from the ESPPA-related requests pursuant to Order No. 37427.²⁰

On April 9, 2021, the Commission issued Order No. 37721, modifying the procedural schedule to seek comments from the Parties and Participant on several enumerated issues and concerns, as well

¹⁸Kapolei Energy Storage I, LLC's Motion for Leave to File a Reply Statement of Position," filed on March 8, 2021 ("Motion for Leave"). The Motion for Leave also included Kapolei Energy Storage I's Reply SOP, attached as "Exhibit 'A'" ("Kapolei Energy Storage I Reply SOP").

¹⁹Order No. 37688, "Granting Kapolei Energy Storage I, LLC's Motion for Leave to File a Reply Statement of Position," filed on March 22, 2021 ("Order No. 37688").

²⁰Letter From: K. Katsura To: Commission Re: Docket No. 2020-0136 - For Approval of an Energy Storage Power Purchase Agreement for Energy Storage Services with Kapolei Energy Storage I, LLC, "Request for Approval of Overhead Line," filed on April 6, 2021 ("Hawaiian Electric's Overhead Line Request").

as suggestions for potential mitigating actions.²¹ The Parties and Participant submitted responsive comments on April 16, 2021.²²

The Commission also issued additional IRs on April 12, 2021, to which Hawaiian Electric and Kapolei Energy Storage I responded on April 19, 2021,²³ and further supplemented on April 23, 2021.²⁴

Pursuant to the procedural schedule set forth in Order No. 37427, as modified by Order Nos. 37618, 37688, and 37721,

²¹Order No. 37721, "Identifying Commission Concerns and Instructing Further Briefing," filed on April 9, 2021 ("Order No. 37721").

²²Kapolei Energy Storage I LLC's Comments Addressing the Commission's Concerns and Proposed Mitigations," filed on April 16, 2021 ("Kapolei Energy Storage I's Comments & Mitigations"); "Division of Consumer Advocacy's Comments Addressing the Concerns Raised in the Public Utilities Commission's Order No. 37721," filed on April 16, 2021 ("Consumer Advocate's Comments"); and "Hawaiian Electric Company, Inc.'s Written Comments Addressing Commission Concerns and Proposed Mitigations; and Certificate of Service," filed on April 16, 2021 ("Hawaiian Electric's Comments").

²³Letter From: K. Katsura To: Commission Re: Docket No. 2020-0136 - Hawaiian Electric Energy Storage Power Purchase Agreement for Energy Storage Services with Kapolei Energy Storage I, LLC; "Responses to Commission Information Requests," filed on April 19, 2021; "Kapolei Energy Storage I, LLC's Response to Commission's Information Requests, PUC-KES-IR-106 to PUC-KES-IR-108, Issued April 12, 2021; Attachment A; Exhibits '1'-'3'; and Certificate of Service," filed on April 19, 2021.

²⁴Letter From: K. Katsura To: Commission Re: Docket No. 2020-0136, Hawaiian Electric Energy Storage Power Purchase Agreement for Energy Storage Services with Kapolei Energy Storage I, LLC; "Supplemental Responses to Commission Information Requests," filed April 23, 2021.

no further briefing is contemplated, and the ESPPA-related requests are ready for decision making.²⁵

B.

Parties To The ESPPA

Hawaiian Electric is an operating public utility engaged in the production, transmission, distribution, purchase, and sale of electricity on the island of Oahu.²⁶

Kapolei Energy Storage I states that it is a Delaware limited liability company, registered to do business in Hawaii with the Department of Commerce and Consumer Affairs as a foreign limited liability company.²⁷ It is a subsidiary of Plus Power, LLC, which is headquartered in San Francisco, California, with over 3,000 MW of battery storage projects throughout the country.²⁸ Furthermore, Power Plus, LLC is a subsidiary of Delaware Life Group, which, along with Franklin Park Infrastructure, LLC, provides funding for capital and long-term equity investments.²⁹

²⁵See Order No. 37424 at 19.

²⁶Application at 7.

²⁷Motion to Participate at 4; see also Application at 19, Exhibit 1 at Attachments A-5 and A-6.

²⁸Motion to Participate at 4; see also Application at 19, Exhibit 1 at Attachment A-7.

²⁹Motion to Participate 5; see also Application at 20, Exhibit 1 at Attachment A, Exhibit A-2.

Members of Kapolei Energy Storage I's team have previous experience implementing projects in Hawaii, including being responsible for "the deployment of the 12 MW Koloa solar project, the largest solar project in the [S]tate of Hawaii at the time[,]" in 2013.³⁰ Additionally, in 2017, the same team led the development of the Kapaia Solar + Storage project, Hawaii's first utility scale battery storage project.³¹

C.

The Project

The Project will be located within the Kapolei Harborside Industrial Project, west of Kalaeloa Boulevard, on property leased from Kapolei Properties, LLC, an affiliate of the James Campbell Company, LLC, and identified by Tax Map Key No. ("TMK") (1)9-1-014-042.³² The Project will be sited on approximately 7.5 acres of largely vacant land that is currently zoned I-2 Intensive Industrial and is not in the vicinity of residential neighbors.³³

³⁰Motion to Participate at 4; Application at 19.

³¹Motion to Participate at 4-5; Application at 19.

³²Application at 20; Exhibit 8 at 25.

³³Application at 20.

Pursuant to the ESPPA, Kapolei Energy Storage I will construct, own, and operate the Project, which will consist of a 185 MW, 565 MWh lithium-ion BESS that will connect directly to the Hawaiian Electric grid.³⁴ “This BESS is intended to provide a four-hour, 135 MW, 540 MWh load-shifting resource and a 30-minute, 50 MW, 25 MWh Fast Frequency Response resource.”³⁵ Kapolei Energy Storage I indicates that the BESS will consist of battery modules, inverter systems, and switchgear and will charge from energy provided by the Hawaiian Electric grid.³⁶ The BESS will connect directly to Hawaiian Electric’s CEIP 138 kV Substation.³⁷

According to Hawaiian Electric, the Project will help to provide the capacity necessary to facilitate the retirement of the AES Hawaii coal plant, scheduled for September 2022, through the provision of flexible, dispatchable energy.³⁸

³⁴Application at 20-21.

³⁵Application at 21.

³⁶Application at 21.

³⁷Application at 22.

³⁸Application at 2.

D.

Material Terms Of The ESPPA

The salient terms of the ESPPA are summarized below.³⁹ In general, Hawaiian Electric states that “[t]he ESPPA contains indemnification, insurance, pricing, and other provisions, including those pertaining to the [ESPPA’s] Term, [Project’s] charging, storing, and discharging of energy to and from the [Hawaiian Electric] system, and Seller’s compliance with laws, which will serve to protect [Hawaiian Electric] and its customers from certain risks associated with interconnecting with the [Project].”⁴⁰

Term: The initial term of the ESPPA is 20 years following the Commercial Operations Date (“Term”).⁴¹ Thereafter, the ESPPA automatically terminates upon expiration of the Term.⁴²

Commission Approval and Associated Termination Rights: Hawaiian Electric and Kapolei Energy Storage I are required to use “good faith efforts to obtain, as soon as practicable,”

³⁹The terms and conditions of the ESPPA are also summarized in Exhibit 4 of the Application. In addition, the complete ESPPA is attached as Exhibit 1 to the Application. Citations to the ESPPA will be by the Application’s “Exhibit _” numbers, rather than the ESPPA’s internal page numbering.

⁴⁰Application at 23.

⁴¹Application, Exhibit 1 at 2.

⁴²Application, Exhibit 4 at 2; see also, id., Exhibit 1 at 8, § 3.1.

a satisfactory Commission order approving the ESPPA within 12 months of the execution date of the ESPPA.⁴³ If a satisfactory Commission order is not issued within 12 months, or within a longer period as agreed to by Hawaiian Electric and Kapolei Energy Storage I, either Hawaiian Electric or Kapolei Energy Storage I may, within 180 days of such date, issue written notice declaring the ESPPA null and void.⁴⁴ Similarly, if a Commission approval order is issued within 12 months but is appealed, and a non-appealable Commission order approving the ESPPA is not obtained within 24 months from the date the Application was filed, 18 months from the filing of the date of such appeal, or such longer period as Hawaiian Electric and Kapolei Energy Storage I may agree subsequently upon, either Hawaiian Electric or Kapolei Energy Storage I may, by written notice within 90 days of such date, declare the ESPPA null and void.⁴⁵

Hawaiian Electric clarifies that "[t]imeframes for Commission approval were set based on the Project's need to timely

⁴³Application, Exhibit 4 at 2 (citing Exhibit 1 at 76, § 24.3).

⁴⁴Application, Exhibit 4 at 2-3 (citing Exhibit 1 at 76, § 24.4).

⁴⁵Application, Exhibit 4 at 3; see also, id., Exhibit 1 at 76, § 24.4.

achieve Commercial Operations to fulfill system needs for the replacement of the AES Hawaii coal plant.”⁴⁶

Company Right to Declare ESPPA Null and Void Prior to

Effective Date: Hawaiian Electric may declare the ESPPA null and void prior to the effective date for the following reasons:

- (A) Seller implements material changes in the type of, or performance specifications of, the equipment that affects the results of the [Interconnection Requirements Study (“IRS”)] or [P]roject schedule without Hawaiian Electric’s consent.
- (B) Seller is in breach of Section 18.2(c) or 18.2(d) of the ESPPA requiring Seller to have obtained certain Land Rights and Governmental Approvals, or the provisions of Attachment G (Company-Owned Interconnection Facilities) requiring the payment by Seller to [Hawaiian Electric] of certain specified amounts for interconnection facilities.
- (C) Seller, after making payment for the interconnection facilities, requests in writing that Hawaiian Electric stop or otherwise delay the performance of work for which Hawaiian Electric received such payment.⁴⁷

Pricing - Lump Sum Payment: Under the model upon which the ESPPA is based, the Hawaiian Electric Companies⁴⁸ are given

⁴⁶Application, Exhibit 4 at 3.

⁴⁷Application, Exhibit 4 at 3-4 (citing Exhibit 1 at 8-9, § 3.4).

⁴⁸The “Hawaiian Electric Companies” or “Companies” are comprised of Hawaiian Electric, Maui Electric Company, Ltd., and Hawaii Electric Light Company, Inc.

“the contractual flexibility to dispatch energy storage facilities, and, in exchange, developers are provided a monthly payment (‘Lump Sum Payment’) based on the availability and performance of the [Project].”⁴⁹

The Lump Sum Payment specified in this Application was proposed by the Seller in its response to the Request for Proposals for Variable Renewable Dispatchable Generation and Energy Storage issued by Hawaiian Electric (“RFP Response”) for the ability to dispatch the MWh value of the [Project’s] Contract Capacity specified in Seller’s RFP Response, and is a set value throughout the term of the ESPPA.⁵⁰

Consequently, the ESPPA does not provide for any energy payment; rather, “the Lump Sum Payment is made in exchange for the right to dispatch the [Project’s] energy storage.”⁵¹

Pre-Commercial Charging Energy Allowance: Kapolei Energy Storage I can receive up to five times the Contract Capacity (in MWh) of Charging Energy for purposes of “testing, commissioning, and satisfying the conditions to achieve Commercial Operations in accordance with Article 8 (Charging Energy Obligations)

⁴⁹Application, Exhibit 4 at 2. The ESPPA is based on a new contractual model referred to as the “Renewable Dispatchable Generation Power Purchase Agreement” (“RDG-PPA”), which was originally developed for contractual agreements between utilities and developers of solar plus storage grid-scale projects.

⁵⁰Application, Exhibit 4 at 5 (emphasis added).

⁵¹Application, Exhibit 4 at 5.

of the ESPPA.”⁵² Prior to the Commercial Operations Date, Kapolei Energy Storage I shall bear any costs for energy provided in excess of such amount, at the rate of the Energy Cost Recovery Factor.⁵³

Outage Costs: Kapolei Energy Storage I is responsible for all energy lost from the BESS during an outage at the rate of the Energy Cost Recovery Factor, except if Hawaiian Electric requested the outage for reasons other than Seller-Attributable Unavailability and Kapolei Energy Storage I “exercised commercially reasonable efforts to limit the [e]nergy losses to the [BESS’s] standby consumption.”⁵⁴

Pricing - Liquidated Damages: Liquidated Damages (“Liquidated Damages”) are assessed if/when Kapolei Energy Storage I fails to achieve certain Performance Metrics that indicate Hawaiian Electric “is not receiving the benefit of its dispatch rights over the [Project’s] energy production and storage.”⁵⁵ Liquidated Damages are assessed based on the full Lump Sum Payment amount and have “the potential to reduce [the Lump Sum Payment] down to zero if the [Project] is completely

⁵²Application, Exhibit 4 at 5.

⁵³Application, Exhibit 4 at 5.

⁵⁴Application, Exhibit 4 at 5-6.

⁵⁵Application, Exhibit 4 at 6.

unavailable or if the [Project] is available but underperforming in other aspects as measured by the Performance Metrics.”⁵⁶

The Performance Metrics include:

1. The Capacity Performance Metric, which is used to confirm the capability of the BESS to discharge as required by the terms of the ESPPA;

2. The Equivalent Availability Factor (“EAF”) Performance Metric, which is used to evaluate if the BESS is meeting its expected availability;

3. The Equivalent Forced Outage Factor (“EFOF”) Performance Metric, which is used to evaluate if the BESS is experiencing excessive unplanned outages;

4. The Round Trip Efficiency (“RTE”) Performance Metric, which is used to evaluate the efficiency of the BESS; and

5. The Fast Frequency Response (“FFR”) Performance Metric, which is used to measure whether the frequency response of the BESS to Hawaiian Electric’s system frequency is acceptable and consistent with required FFR and mutually agreed upon tuning parameters.⁵⁷

⁵⁶Application at 21; see generally, id. at Exhibit 4.

⁵⁷Application, Exhibit 1 at 11-19, §§ 4.2-4.7.

In the event that Kapolei Energy Storage I fails to achieve one or more of the Performance Metrics, there is a Liquidated Damages amount that is associated with such failure.⁵⁸

Company's Right of First Negotiation to Purchase the Project: In the event Kapolei Energy Storage I wishes to assign its interest in the Project or effect a change of control, Hawaiian Electric has the first right to negotiate for purchase of the Project.⁵⁹ Additionally, "in the event that [Hawaiian Electric] is subject to consolidation under [Financial Accounting Standards Board Accounting Standards Codification] 810, with respect to Seller and the [Project], . . . [Hawaiian Electric

⁵⁸Application, Exhibit 1 at 12-19, §§ 4.3-4.7.

⁵⁹Application, Exhibit 4 at 6 (citing, Exhibit 1 at 52, § 15.1; and Application, Exhibit 1 at 193-202, Attachment P). The ESPPA also provides for limited instances of "exempt sales" to which Hawaiian Electric's right of first negotiation does not apply. See id., Exhibit 1 at 194-195, Attachment P, § 1(c).

and Seller] shall effectuate a sale of the [Project] to [Hawaiian Electric]. Such sale shall be on commercially reasonable terms“ as specified in the ESPPA.⁶⁰ Hawaiian Electric clarifies that any such purchase of the Project by Hawaiian Electric “shall be subject to application to the Commission for approval, and, prior to consummation, formal Commission approval of such purchase.”⁶¹

Similarly, at the end of the ESPPA Term, Hawaiian Electric has the right of first negotiation to purchase the Project.⁶²

Compliance with Laws and Regulations: Under the ESPPA, Kapolei Energy Storage I is responsible for the following:

- (A) Obtaining any and all necessary permits, government approvals, and land rights for the construction and operation of the Project;
- (B) Installing, operating, and maintaining the Project safely and in compliance with all applicable laws; and

⁶⁰Application, Exhibit 4 at 6 (citing Exhibit 1 at 7-8, § 23.5, Attachment P at § 6).

⁶¹Application, Exhibit 4 at 6.

⁶²Application, Exhibit 4 at 6 (citing Exhibit 1 at 52, § 15.1; and Exhibit 1 at 196, Attachment P).

(C) Prior to commencement of construction of the Company-owned Interconnection Facilities, providing the necessary permits, government approvals, and land rights for construction, ownership, operation, and maintenance of the Company-Owned Interconnection Facilities.⁶³

Site Restoration: After termination of the ESPPA, or if the ESPPA is declared null and void, Kapolei Energy Storage I will, upon Hawaiian Electric's request, remove all Company-Owned Interconnection Facilities and Seller-Owned Interconnection Facilities from the land and restore the land to its condition prior to construction (alternatively, Hawaiian Electric may elect to remove all or part of the Company-Owned Interconnection Facilities and/or Seller-Owned Interconnection Facilities, in which case Kapolei Energy Storage I will reimburse Hawaiian Electric for the cost of removal).⁶⁴

Company Dispatch: Hawaiian Electric will have discretion to dispatch the Project in its preferred manner.⁶⁵

⁶³Application, Exhibit 4 at 7 (citing Exhibit 1 at 35-36, §§ 10.1 - 10.3).

⁶⁴Application, Exhibit 4 at 7 (citing Exhibit 1 at 165-166, Attachment G, § 7).

⁶⁵Application, Exhibit 4 at 7.

Credit Assurance and Security: Kapolei Energy Storage I is required to post and maintain Development Period Security and Operating Period Security.⁶⁶

Guaranteed Milestones and Commercial Operation: Kapolei Energy Storage I has agreed to meet mutually agreed upon Guaranteed Project Milestones, as set forth in the ESPPA.⁶⁷ Failure to meet such milestones will result in Kapolei Energy Storage I being subjected to Daily Delay Damages and, potentially, termination for failure to cure.⁶⁸

If a Project milestone is not achieved by the applicable deadline, Kapolei Energy Storage I shall pay Daily Delay Damages to Hawaiian Electric in the amount of \$51,389 per day following the tenth day after the applicable milestone deadline, not to exceed 180 days for each missed milestone.⁶⁹

⁶⁶Application, Exhibit 4 at 7 (citing Exhibit 1 at 48, Article 14).

⁶⁷Application, Exhibit 4 at 8 (citing Exhibit 1 at 37-38, Article 11).

⁶⁸Application, Exhibit 4 at 8 (citing Exhibit 1 at 38, Article 11).

⁶⁹Application, Exhibit 1 at 39, § 11.6.

Land Rights: Kapolei Energy Storage I will obtain all Land Rights required for the construction, ownership, operation, and maintenance of the Project and the interconnection of the Project to the Hawaiian Electric system.⁷⁰

Executive Order: Kapolei Energy Storage I will comply with the Executive Order on Securing the United States Bulk-Power System, which “prohibits certain transactions for the acquisition of bulk-power system electric equipment from foreign adversaries.”⁷¹

Cybersecurity: Kapolei Energy Storage I will implement cybersecurity policies and standards, including “segmenting and segregating networks and functions, hardening network devices, securing access to infrastructure, and protecting against malicious software or unauthorized code.”⁷²

Community Outreach Plan: Prior to the Execution Date, Kapolei Energy Storage I will develop and provide a comprehensive outreach and communications plan on its Project-specific website

⁷⁰Application, Exhibit 4 at 8 (citing Exhibit 1 at 35-36, Article 10).

⁷¹Application, Exhibit 4 at 8 (citing Exhibit 1 at 89, § 27.24).

⁷²Application, Exhibit 4 at 9 (citing Exhibit 1 at 123, Attachment B at § 1(b)(iii)(G)).

for the term of the ESPPA.⁷³ Kapolei Energy Storage I is also required to: (1) host a public meeting for the neighboring community, stakeholders, and general public to provide information, an opportunity to voice concerns, mitigation measures and potential Project benefits, and receive written unedited comments; and (2) consider any potential impacts on historical and cultural resources and determine what, if any, action should be taken to protect native Hawaiian rights.⁷⁴

II.

PARTIES' AND PARTICIPANT'S POSITIONS

A.

Hawaiian Electric

In support of its Application, Hawaiian Electric puts forth a number of justifications, including that the Project: (1) is consistent with the Power Supply Improvement Plan ("PSIP")⁷⁵ and Commission's Inclinations⁷⁶; (2) is the result of a competitive

⁷³Application, Exhibit 4 at 9 (citing Exhibit 1 at 85-86, § 27.17)

⁷⁴Application, Exhibit 4 at 9; see also Exhibit 1 at 85-86, § 27.17.

⁷⁵Application at 3 and 12 (citing In re Public Util. Comm'n, Docket No. 2014-0183, "The Hawaiian Electric Companies' PSIPs Update Report: December 23, 2016," filed on December 23, 2016 ("PSIP Update 2016"), at ES-2.

⁷⁶Application at 3 and 8-9; see In re Public Util. Comm'n, Docket No. 2012-0036, Decision and Order No. 32052, Exhibit A,

procurement process⁷⁷; (3) provides capacity for replacement of the AES Hawaii coal plant⁷⁸; (4) is expected to provide bill savings to customers⁷⁹; (5) will reduce customer exposure to volatility in fuel prices⁸⁰; (6) will support interconnection of additional renewable resources to Hawaiian Electric's system⁸¹; (7) will increase progress towards renewable portfolio standards ("RPS") goals⁸²; (8) will provide FFR and essential grid services⁸³; (9) will reduce fossil fuel consumption⁸⁴; and (10) will improve Hawaiian Electric's ability to "leverage maximum value from various resources elsewhere on the Company's system[,]" through the ESPPA's incorporation of "the concept of dispatchability of independent power facilities[.]"⁸⁵

"The Commission's Inclinations on the Future of Hawaii's Electric Utilities," filed on April 28, 2014 ("Commission's Inclinations").

⁷⁷Application at 3 and 9 (citing In re Public Util. Comm'n, Docket No. 03-0372, Decision and Order No. 23121, filed on December 8, 2006).

⁷⁸Application at 3 and 9.

⁷⁹Application at 3 and 11.

⁸⁰Application at 4 and 13.

⁸¹Application at 4.

⁸²Application at 4 and 12.

⁸³Application at 4 and 9-10.

⁸⁴Application at 4 and 11-12.

⁸⁵Application at 5.

Consistent with the Commission's Inclinations:

Hawaiian Electric states that the ESPPA is consistent with the Commission's Inclinations.⁸⁶ Hawaiian Electric notes that the Commission's Inclinations offer "perspectives on the vision, business strategies and regulatory policy changes required to align the Hawaiian Electric Companies' business model with customers' interests and the [S]tate's public policy goals."⁸⁷ Hawaiian Electric asserts that this includes urging the Hawaiian Electric Companies to modernize the generation system to achieve high penetrations of renewable resources through the utilization of new tools, such as energy storage, to promote grid flexibility efficiently and cost-effectively.⁸⁸ Hawaiian Electric further notes the Commission recognized that advancements in technologies, such as energy storage, can cost-effectively provide

⁸⁶Application at 3 and 9; see Commission's Inclinations at 1.

⁸⁷Application at 8 (citing Commission's Inclinations at 1).

⁸⁸Application at 8 (citing Commission's Inclinations at 6).

grid services that are potentially deliverable from non-utility owned renewable energy generation.⁸⁹ Hawaiian Electric believes that, as it increases the amount of contracted variable energy production, energy storage will be key to distributing energy throughout the day to coincide with demand and providing FFR, regulating reserves, and load-shifting.⁹⁰

Competitive Procurement Process: Hawaiian Electric states that the ESPPA is the result of the Stage 2 RFP process established in Docket No. 2017-0352, which allowed Hawaiian Electric to select a portfolio of projects to provide contemplated benefits at competitive pricing.⁹¹

Provides Replacement for the AES Hawaii Coal Plant: Hawaiian Electric notes that the largest generator on its system is located at the AES Hawaii coal plant, which is scheduled to retire in September 2022.⁹² As a result, Hawaiian Electric will need to replace the energy MWh and capacity MW supplied by the AES Hawaii coal plant to ensure that it will continue to be

⁸⁹Application at 8-9 (citing Commission's Inclinations at 8).

⁹⁰Application at 9.

⁹¹Application at 9; see generally In re Hawaiian Elec. Co., et al. Inc., Hawaii Elec. Light Co., Inc., and Maui Elec. Co., Ltd., Docket No. 2017-0352 ("Stage 2 RFP" or "Phase 2 RFP").

⁹²Application at 9.

able to meet the energy needs of its customers.⁹³ Accordingly, Hawaiian Electric asserts that the Project will provide necessary functionality after the plant's closure.⁹⁴

Provides Essential Grid Services: Hawaiian Electric contends that the BESS will be able to dispatch available energy in real time, thereby providing FFR to limit any frequency drop that results from frequency disturbance and may contribute to the grid services as proposed in Hawaiian Electric's Integrated Grid Planning ("IGP") process.⁹⁵ The BESS will allow Hawaiian Electric to dispatch energy to serve customer demand and provide replacement reserves.⁹⁶

Additionally, Hawaiian Electric contends the Project will contribute to grid stabilization for faults and contingencies, provide grid services to alleviate reliance on fossil fuel firm conventional generation units, provide greater

⁹³Application at 9.

⁹⁴Application at 9.

⁹⁵Application at 10 (citing Hawaiian Electric's IGP website for additional information, available at: [https://www.hawaiianelectric.com/documents/clean energy hawaii/integrated grid planning/stakeholder engagement/working groups/solution evaluation and optimization/20200522 wg seo meeting presentation slides.pdf](https://www.hawaiianelectric.com/documents/clean%20energy%20hawaii/integrated%20grid%20planning/stakeholder%20engagement/working%20groups/solution%20evaluation%20and%20optimization/20200522%20wg%20seo%20meeting%20presentation%20slides.pdf)).

⁹⁶Application at 10.

flexibility and certainty in delivering necessary grid services, and facilitate system reliability as fossil-fuel synchronous units are reduced or eliminated.⁹⁷

Lastly, Hawaiian Electric states that use of stored energy from the Project can add to grid resilience by providing black start capability, which will support restoration of the grid after a system blackout.⁹⁸

Energy Storage Power Purchase Agreement: According to Hawaiian Electric, the ESPPA contains advantageous terms that protect Hawaiian Electric and its customers from risks associated with interconnecting the BESS, including ensuring that the Project is available and capable to perform at any time it is dispatched during the Term of the ESPPA.⁹⁹

Reasonable Pricing to Customers: The ESPPA establishes a fixed lump sum payment that is not tied to the price of fossil fuels, which Hawaiian Electric anticipates will result in lower rates for customers.¹⁰⁰ Hawaiian Electric estimates that the Project will provide bill savings to customers over the Term of the ESPPA, including a projection that residential customers who

⁹⁷Application at 10.

⁹⁸Application at 10.

⁹⁹Application at 11.

¹⁰⁰Application at 11.

consume 500 kilowatt hours ("kWh") per month could save an average of approximately \$0.28 per month.¹⁰¹

Reduces Fossil Fuel Consumption: Hawaiian Electric expects the Project to reduce fossil-fuel consumption by decreasing the need to dispatch oil-fueled units, "due to [the Project's] ability to provide the capacity and other grid services typically received from these oil-fueled units."¹⁰²

Reduces Greenhouse Gas ("GHG") Emissions: Hawaiian Electric states that the Project will contribute to the State's goal of reducing GHG emissions.¹⁰³ Hawaiian Electric estimates that the renewable energy supplied by the Project will result in avoiding approximately 6,599,495 barrels of fuel over the term of the ESPPA.¹⁰⁴ Hawaiian Electric also estimates that the Project will result in "a Net GHG Emissions Reduction of 2,742,467 metric tons ('MT') of carbon dioxide-equivalents ('CO₂e') or 696 kilograms CO₂e per megawatt-hour ('kg CO₂e/MWh') per Project

¹⁰¹Application at 3 and 11; id., Exhibit 3 at 5 and Attachment 6 (reflecting bill savings for a typical residential customer using 500 kWh of electricity per month). Hawaiian Electric also notes that in conjunction with its other Stage 2 RFP projects for Oahu, a typical residential customer using 500 kWh per month could potentially save an average of \$0.99 per month. Id. at 3 and 11.

¹⁰²Application at 11-12.

¹⁰³Application at 4 and 12.

¹⁰⁴Application at 4 and 16; id., Exhibit 3 at 3.

operation and 2,623,722 MT of CO₂e or 666 kg CO₂e/MWh per Project lifecycle.”¹⁰⁵

Hawaiian Electric asserts that these estimated results are consistent with objectives identified in HRS § 226-18(a), including:

- (1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people;
- (2) Increased energy self-sufficiency where the ratio of indigenous to imported energy use is increased;
- (3) Greater energy security and diversification in the face of threats to Hawaii’s energy supplies and systems; [and]
- (4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use¹⁰⁶

Hawaiian Electric maintains that the ESPPA and Project are relevant to the considerations listed in HRS § 269-6(b), which require the Commission to “explicitly consider, quantitatively or qualitatively, the effect of the State’s reliance on fossil fuels on price volatility, export of funds for fuel imports, fuel supply reliability risk, and greenhouse gas emissions.”¹⁰⁷

¹⁰⁵Application, Exhibit 5 at 5; see also, id. at 4, 12 and 18 (November 18, 2020 correction).

¹⁰⁶Application at 16 (citing HRS § 226-18(a)).

¹⁰⁷Application at 17-18 (citing HRS § 269-6(b)).

Increases RPS: Hawaiian Electric refers to the State's RPS goals, which require each of the State's electric utility companies to establish a RPS of: (a) 30% of its net electricity sales by December 31, 2020; (b) 40% of its net electricity sales by December 31, 2030; (c) 70% of its net electricity sales by December 31, 2040, and (d) 100% of its net electricity sales by December 31, 2045.¹⁰⁸

Hawaiian Electric asserts that the Project will assist in reaching the State's RPS goals, despite its lack of generation capability.¹⁰⁹ Hawaiian Electric estimates that the Project will provide "up to 0.15 percentage points of Hawaiian Electric's 2025 RPS and 0.12 percentage points towards the Hawaiian Electric Companies' consolidated 2025 RPS[.]"¹¹⁰

Consistent with PSIP Objectives and Decreases Reliance on Foreign Imported Oil: Hawaiian Electric maintains that the Project is consistent with PSIP objectives, including transitioning to energy independence and decreasing reliance on foreign imported oil, while maintaining Hawaiian Electric system reliability.¹¹¹

¹⁰⁸Application at 17 (citing HRS § 269-92(a)).

¹⁰⁹Application at 4 and 12.

¹¹⁰Application at 12; see Exhibit 6.

¹¹¹Application at 4, 12, 15-16; see PSIP Update 2016 at E-2.

Reduced Customer Exposure to Volatility in Fuel Prices:

While fuel prices are historically unpredictable, Hawaiian Electric asserts that the ESPPA will reduce customer exposure to such volatility by reducing fossil fuel consumption.¹¹² Hawaiian Electric maintains that the Project will allow for the storage of excess renewable energy that can be used at times when renewable generation resources are unavailable, thereby displacing fossil fuel that would otherwise need to be burned, resulting in decreased fuel consumption.¹¹³

B.

The Consumer Advocate

The Consumer Advocate recommends approving Hawaiian Electric's ESPPA-related requests, subject to certain conditions.¹¹⁴ In reaching this recommendation, the Consumer Advocate states that it considered: (1) the procurement process; (2) the pricing, bill impact, and net benefits associated with the proposed ESPPA; (3) the terms and conditions of the proposed ESPPA; (4) community outreach; and (5) the Project's effect on the State's reliance on

¹¹²Application at 4 and 13.

¹¹³Application at 4 and 13.

¹¹⁴See Consumer Advocate SOP at 1-2 and 46-47.

fossil fuels, GHG emissions, and contribution to renewable portfolio goals.¹¹⁵

Notwithstanding certain concerns, including issues raised by Bates White, LLC, who served as the Independent Observer (“IO”) during the competitive procurement that resulted in the Stage 2 RFP projects,¹¹⁶ the reasonableness of the Lump Sum Payments, the lack of near-term bill savings benefits, and certain ambiguities in Hawaiian Electric’s GHG analysis, the Consumer Advocate concludes that “there does not appear to be any ‘fatal’ flaws in the areas discussed above.”¹¹⁷

The Consumer Advocate therefore recommends, subject to certain conditions: (1) approving the ESPPA between Kapolei Energy Storage I and Hawaiian Electric, dated September 11, 2020; (2) finding that the purchased power arrangements in the ESPPA are reasonable, with explicit consideration of the effect on the State’s reliance on fossil fuels on price volatility, export of funds for fuel imports, fuel supply reliability risk, and GHG emissions; (3) authorizing Hawaiian Electric to include all

¹¹⁵Consumer Advocate SOP at 11-12.

¹¹⁶In re Hawaiian Elec. Co., Inc., et al., Docket No. 2017-0352, Letter From: K. Katsura To: Commission Re: Docket No. 2017-0352 – To Institute a Proceeding Relating to a Competitive Bidding Process to Acquire Dispatchable and Renewable Generation; “Phase 2 Independent Observer’s Report on RFPs for Variable RDG on Oahu,” filed on October 21, 2021 (“Oahu Phase 2 RFP IO Report”).

¹¹⁷Consumer Advocate SOP at 38.

payments for energy and non-energy under the ESPPA, including the Lump Sum Payments, in Hawaiian Electric's PPAC to the extent such costs are not included in Hawaiian Electric's base rates; and (4) approving the proposed accounting and ratemaking treatment for the purchased power expenses under the ESPPA.¹¹⁸

The Consumer Advocate also recommends the following conditions be included in any approval granted by the Commission:

1. Kapolei Energy Storage I shall file copies of all invoices relating to the engineering, procurement, construction, and maintenance associated with the ESPPA no later than 60 days after the Commercial Operations Date, as well as its income statements or result of operations related to the ESPPA that will allow the Commission and the Consumer Advocate to evaluate the comparability of the Project's actual results to the pro forma information. To the extent additional information is necessary in connection with this condition, the Consumer Advocate be allowed to issue IRs to Kapolei Energy Storage I as a participant in this proceeding;
2. As it relates to future procurement processes, bidders should be required to file the pro forma information related to their project, documentation (e.g., copies of leases, EPC contracts etc.) - including native files with formulas intact - to support its bid price;
3. Hawaiian Electric shall file, within 25 days of any missed Guaranteed Project Milestone, the milestone missed, the reason(s) why the milestone was missed, as well as measures the Company believes will address the delay, including preventing similar delays for the same or other projects in the future;

¹¹⁸Consumer Advocate SOP at 1-2.

4. Hawaiian Electric shall file hourly commitment, dispatch, and curtailment data for the Project and all other Hawaiian Electric and Independent Power Producers ("IPP") units on the system, consistent with the requirements for the same report as ordered in Docket No. 2020-0137, Decision and Order No. 37516, filed on December 30, 2020;
5. Hawaiian Electric shall file an estimate of the average ratio of fossil fuel-to-renewable generation used to charge the BESS, utilizing the reported hourly dispatch information for the month, in an effort to encourage Hawaiian Electric to not only dispatch and utilize cost-effective renewable energy that is available by utility-scale resources, as well as through programs for distributed energy resources, community-based renewable energy resources, and microgrids, economically to the benefit of customer bills, but to do so with the consideration of reducing GHG emissions, while maintaining system reliability;
6. All completed environmental assessments that will be used to develop a detailed decommissioning plan and methodology should be in place to determine if the land has been restored to its condition prior to the development and construction of the Project;
7. Hawaiian Electric shall file an end-of-life management plan within five years of the date of the order entered in this docket regarding its ESPPA-related requests;
8. In regard to future outreach efforts, encourage Seller to offer both live in-person and virtual testimony opportunities and that such testimony be broadcast and recorded, with transcribed questions/comments of public outreach meetings to increase accessibility and transparency; and
9. The two issues identified by the IO in the Oahu Phase 2 RFP IO Report be addressed for future RFPs.¹¹⁹

¹¹⁹Consumer Advocate SOP at 38-44 (citations omitted).

The Consumer Advocate finds that it is reasonable to include the ESPPA payments in the PPAC and does not object to their inclusion, provided that such costs are not already included in another cost recovery mechanism.¹²⁰

Furthermore, the Consumer Advocate does not object to Hawaiian Electric's proposed ratemaking treatment; however, the Consumer Advocate does note that, should there be any changes in Hawaiian Electric's preliminary evaluation, which considered that "the proposed Project was determined to contain a lease," Hawaiian Electric should report what changes to the regulatory asset/liability and ratemaking treatment will be required as a result.¹²¹ Additionally, the Consumer Advocate notes that Hawaiian Electric preliminarily determined that consolidation of financial statements is not required under Financial Accounting Standards Board Accounting Standards Codification ("FASB ASC") 810.¹²² Similar to the above, Hawaiian Electric should report any associated changes in this determination that would instead require the consolidation of its financial statements with Kapolei Energy Storage I.¹²³

¹²⁰Consumer Advocate SOP at 44.

¹²¹Consumer Advocate SOP at 46.

¹²²Consumer Advocate SOP at 46.

¹²³Consumer Advocate SOP at 46.

C.

Kapolei Energy Storage I

Kapolei Energy Storage I recommends that the Commission find that the purchased power arrangements under the ESPPA, including the Lump Sum Payments to be paid to Kapolei Energy Storage I, are prudent and in the public interest with explicit consideration under HRS § 269-6.¹²⁴

In support thereto, Kapolei Energy Storage I states:

1. The Project will assist Hawaiian Electric in achieving the State's RPS goals;
2. The Project will help Hawaiian Electric move towards energy independence and decrease reliance on imported oil, which is consistent with the PSIP;
3. The Project's introduction of energy storage to promote grid flexibility is consistent with the Commission's Inclinations;
4. The Project will provide much needed energy storage on Oahu;
5. The BESS will support the interconnection of additional renewable resources on to Hawaiian Electric's system;
6. The Project will provide necessary capacity and functionality to enable the retirement of the AES Hawaii coal plant in September 2022;
7. The Project will reduce Hawaiian Electric's GHG emissions;
8. The ESPPA will provide cost savings to Hawaiian Electric's customers, as illustrated by Hawaiian Electric's projection that a typical

¹²⁴Kapolei Energy Storage I SOP at 7.

ratepayer consuming 500 kWh per month will save approximately \$0.28 per month on average during the Term of the ESPPA;

9. The Project's ability to provide the capacity and other grid services typically provided from traditional fossil-fueled generation plants will result in less fossil fuel generation plants being dispatched, thereby reducing Hawaiian Electric's fossil fuel consumption and protecting customers from exposure to fossil fuel price volatility;
10. The Project has already made significant development progress; and
11. The Project is supported by the local community.¹²⁵

D.

Hawaiian Electric Reply

1.

Response to Consumer Advocate

In its Reply SOP, Hawaiian Electric addresses each of the Consumer Advocate's recommended conditions for approval of the ESPPA.

First, Hawaiian Electric indicates that it does not object to the condition requiring Kapolei Energy Storage I to file

¹²⁵Kapolei Energy Storage I SOP at 7-14.

all invoices related to the engineering, procurement, construction, and maintenance associated with the ESPPA within 60 days after the Commercial Operations Date.¹²⁶

Hawaiian Electric also agrees with the Consumer Advocate's recommendation that, with regard to future procurement processes, bidders be required to file pro forma information related to their projects, in addition to supporting documentation.¹²⁷ In support of this position, Hawaiian Electric acknowledges that, "[h]aving now completed the RFP process for Stage 2, the Companies confirm that requiring a complete pro forma would have been beneficial to the process and allowed for a more informed evaluation of developers' proposed projects."¹²⁸

In response to the Consumer Advocate's recommendation that Hawaiian Electric file, within 25 days of any missed Guaranteed Project Milestone, the milestone missed, the reason why the milestone was missed, and any measure to mitigate the impact

¹²⁶Hawaiian Electric Reply SOP at 6.

¹²⁷Hawaiian Electric Reply SOP at 6.

¹²⁸Hawaiian Electric Reply SOP at 7.

(including in the future), Hawaiian Electric does not object, but clarifies that it believes that this reporting requirement should also be imposed on the Seller, as the entity that will have more in-depth and detailed information on the matter.¹²⁹

Additionally, Hawaiian Electric does not object to the Consumer Advocate's recommendation that Hawaiian Electric file hourly commitment, dispatch, and curtailment data for the Project and other Hawaiian Electric and IPP units on the system to support a finding that the project is being used in a manner that maximizes benefits to customers.¹³⁰ Hawaiian Electric notes that the Application identifies the numerous benefits the Project is expected to produce and further notes that it is already required to provide information relating to the use and dispatch of the BESS in reports filed in Docket Nos. 2017-0213 and 2011-0206.¹³¹

Next, Hawaiian Electric states that it does not object to the proposed condition to file an estimate of the average ratio of fossil-fuel-to-renewable energy generation used to charge the BESS, utilizing the reported hourly dispatch information for the month.¹³² However, Hawaiian Electric reiterates that the hourly

¹²⁹Hawaiian Electric Reply SOP at 7-8.

¹³⁰Hawaiian Electric Reply SOP at 8.

¹³¹Hawaiian Electric Reply SOP at 8-11.

¹³²Hawaiian Electric Reply SOP at 11-13

dispatch information is already available to the public via Docket No. 2017-0213 filings, and the requested information may be calculated by computing the ratio of fossil fuel-to-renewable generation dispatched from that available data.¹³³

In response to the Consumer Advocate's recommendation that all completed environmental assessments that will be used to develop a detailed decommissioning plan and methodology be in place to determine if the land has been restored to its condition prior to the development and construction of the Project, Hawaiian Electric agrees with the intent of the Consumer Advocate's recommendation, but submits that:

Since further assessment of potential impacts to the land will continue to be refined throughout the project development, environmental study and permitting processes, a detailed decommissioning plan and methodology . . . has not yet been developed. Any such plans would require an assessment of the Company's needs for the interconnection facilities and the environmental laws in effect at the time of decommissioning, and thus cannot be committed prior to the Project's development and construction.¹³⁴

Regarding the Consumer Advocate's recommendation that Kapolei Energy Storage I develop an end-of-life management plan that Hawaiian Electric files within five years from the date of

¹³³Hawaiian Electric Reply SOP at 13.

¹³⁴Hawaiian Electric Reply SOP at 13-14.

approval of the ESPPA, Hawaiian Electric does not object; however, it suggests that this condition should be imposed on the Seller.¹³⁵

In response to the Consumer Advocate's recommendation to encourage Seller to offer both live in-person and virtual testimony opportunities, and that such testimony be broadcast and recorded, with transcribed questions/comments of public outreach meetings to increase accessibility and transparency, Hawaiian Electric indicates that it does not object to this condition and will encourage developers to take such actions.¹³⁶ However, Hawaiian Electric also notes that it does not have the control over developers' decisions or actions and suggests that such requirement be incorporated into future RFP specifications.¹³⁷

Finally, with regard to the Consumer Advocate's recommendation that the issues identified by the IO in the Oahu Phase 2 RFP IO Report be addressed for future RFPs, Hawaiian Electric agrees with this recommendation, stating that it

¹³⁵Hawaiian Electric Reply SOP at 15.

¹³⁶Hawaiian Electric Reply SOP at 15.

¹³⁷Hawaiian Electric Reply SOP at 15.

will, among other things, "attempt to include more specific information related to other renewable technologies, such as biofuel or other firm generators, for any future, renewable, technology-agnostic RFP."¹³⁸

2.

Response to Kapolei Energy Storage I

Hawaiian Electric supports Kapolei Energy Storage I's SOP to the extent that Kapolei Energy Storage I recommends that the Commission find the purchased power arrangements under the ESPPA are prudent and in the public interest.¹³⁹

III.

DISCUSSION

A.

Legal Authorities

Hawaiian Electric seeks the Commission's approval of the ESPPA and purchase power costs pursuant to HRS § 269-16.22, which states:

All purchase power costs, including costs related to capacity, operations and maintenance, and other costs that are incurred by an electric utility company, arising out of

¹³⁸Hawaiian Electric Reply SOP at 16.

¹³⁹Hawaiian Electric Reply SOP at 17.

power purchase agreements that have been approved by the [P]ublic [U]tilities [C]ommission and are binding obligations on the electric utility company, shall be allowed to be recovered by the utility from the customer base of the electric utility company through one or more adjustable surcharges, which shall be established by the [P]ublic [U]tilities [C]ommission. The costs shall be allowed to be recovered if incurred as a result of such agreements unless, after review by the [P]ublic [U]tilities [C]ommission, any such costs are determined by the [C]ommission to have been incurred in bad faith, out of waste, out of an abuse of discretion, or in violation of law. For purposes of this section, an "electric utility company" means public utility company as defined under section 269-1, for the production, conveyance, transmission, delivery, or furnishing of electric power.

Similarly, HAR § 6-60-6(2) states:

No changes in the fuel and purchased energy costs may be included in the fuel adjustment clause unless the contracts or prices for the purchase of such fuel or energy have been previously approved or filed with the [C]ommission.

B.

Procurement Of The ESPPA

This ESPPA represents one of several competitively procured power purchase agreements resulting from the Hawaiian Electric Companies' second round of competitive procurement to acquire new, dispatchable and renewable energy resources for Oahu, Maui, and Hawaii Island.¹⁴⁰

Collectively, these projects, if approved, would provide approximately 300 MW of new renewable generation and about 2,000 MWh of storage across the Hawaiian Electric Companies' service territories, and are expected to lower electricity bills, on average, approximately \$1 per month on the islands of Oahu and Maui.¹⁴¹ When taking the first round of competitive procurement into account, which produced eight similar solar plus storage project applications in 2018, and seven of which were approved in 2019,¹⁴² the past several years has represented a monumental shift in the electrical energy landscape in Hawaii towards reaching

¹⁴⁰See Docket Nos. 2020-0137, -0138, -0139, -0140, -0141, -0142, and -0143. Negotiations with other renewable project developers that were selected from the second round of competitive bidding are still ongoing and may result in additional PPAs.

¹⁴¹<https://www.hawaiianelectric.com/new-renewable-projects-submitted-to-regulators-will-produce-lower-cost-electricity-advance-clean-energy> (accessed October 28, 2020).

¹⁴²The Commission issued a Decision and Order regarding the Paeahu Solar project in Docket No. 2018-0433 on October 15, 2020, which is currently the subject of a pending appeal.

100% renewable energy generation in accordance with the State's RPS.¹⁴³

The Hawaiian Electric Companies' second round of competitive procurement to acquire new, dispatchable and renewable energy resources for Oahu, Maui, and Hawaii Island has been the focus of Docket No. 2017-0352.¹⁴⁴

In Docket No. 2017-0352, the Commission stated its intent:

[T]o ensure that each competitive bidding process "is fair in its design and implementation so that selection is based on the merits;" that projects selected through a competitive bidding process are consistent with the utility's PSIPs or other current planning documents; that the utility's actions represent prudent practices; and that throughout the process, the utility's interests are aligned with the public interest¹⁴⁵

The competitive procurement process by which the Project was selected was approved by the Commission and was overseen by an IO, consistent with the Commission's Framework for

¹⁴³See HRS § 269-92.

¹⁴⁴See Application at 13-14 and Exhibit 2; see generally, In re Hawaiian Elec. Co., Inc., et al., Docket No. 2017-0352.

¹⁴⁵In re Hawaiian Elec. Co., Inc., et al., Docket No. 2017-0352, Order No. 36474, "Approving the Hawaiian Electric Companies' Proposed Final Variable Requests for Proposals, With Modifications," filed on August 15, 2019 ("Order No. 36474"), at 8-9.

Competitive Bidding.¹⁴⁶ The IO recommended that the Commission accept the proposed ESPPA, stating in part that: (1) the selected bids met the requirements of the RFP; (2) the bids provided the most ratepayer benefits; (3) the bids conform to what was sought by Hawaiian Electric's RFP, and are consistent with Order No. 36474 and Hawaiian Electric's PSIP; (4) the RFP rules were followed by Hawaiian Electric and by bidders, and no violations of RFP rules, the Code of Conduct, or the Framework were observed; and (5) the filed PPAs, which were the product of bilateral negotiations, reflect the value of the winning projects as bid.¹⁴⁷ The Commission acknowledges the Project's conformance with the Framework and the IO's approval of the Project and finds the overall process for procurement was reasonable.

However, despite the initial assurances that a fairly run procurement can provide, it still "does not act as a substitute for the [C]ommission's, or the Consumer Advocate's, independent review of the evidence in determining whether to approve, or recommend approval of, a proposed PPA[,]"¹⁴⁸ and, as such,

¹⁴⁶See Application at 3 (citing In re Pub. Util. Comm'n, Docket No. 03-0372, Decision and Order No. 23121, filed on December 8, 2006 ("Framework")).

¹⁴⁷Consumer Advocate SOP at 12-13.

¹⁴⁸See In re Hawaiian Elec. Co., Inc., Docket No. 2018-0434, Order No. 36168, "Compelling Mililani Solar I, LLC to Respond to Consumer Advocate's Information Requests," filed on February 20, 2019, at 10.

the Commission reviews the ESPPA below, and imposes the significant conditions discussed herein for the sake of continuation of reliable service following the scheduled retirement of the AES coal plant, which, as previously stated, is of paramount concern and represents a significant public interest.

C.

Addressing The ESPPA

Notwithstanding Hawaiian Electric's and Kapolei Energy Storage I's representations, discussed above, the Commission has articulated significant concerns with the necessity and proposed utilization of the Project, including Hawaiian Electric's plans to charge the Project with fossil-fueled generation in both the short- and long-term, and Hawaiian Electric's ability to deliver long-term benefits to customers from the Project.

Specifically, the Commission enumerated its main topics of concern in Order No. 37721,¹⁴⁹ which included: (1) the long-term need for the Project, given the additional storage provided under approved Stage 1 and 2 RFP projects;¹⁵⁰ (2) the lack of planned or

¹⁴⁹Order No. 37721 at 8-16.

¹⁵⁰See In re Public Util. Comm'n, Docket No. 2021-0024, "Notice of Status Conference on Tuesday, March 16, 2021," filed on March 9, 2021 ("March Letter"), and "Agenda and YouTube Link for Status Conference on Tuesday, March 16, 2021," filed on March 11, 2021; and Hawaiian Electric's and HNEI's PowerPoint presentations from the Status Conference, "Grid Planning for

accelerated new plant retirements and renewable additions as a result of the Project;¹⁵¹ (3) plans for the continued utilization of fossil-fuel generation to charge the Project in the near- and long-term;¹⁵² and (4) the Project's position as the highest cost Stage 1 or 2 RFP project coupled with Hawaiian Electric's failure to demonstrate the intent or ability of the Project to maximize customer value under current utilization plans.¹⁵³

Many of these concerns are not newly stated, and have been prominently noted in multiple settings, including in this docket, Docket No. 2017-0352, and Docket No. 2021-0024. The Commission previously noted that replacing units like the AES coal plant with batteries that are primarily charged with non-renewable generation "would be a problem from both a fossil fuel consumption[,] as well as an economic perspective, given oil and renewables' respective avoided costs."¹⁵⁴

Modern Power System in Hawaii; AES Retirement Replacement Analysis," filed on March 23, 2021.

¹⁵¹See Application, Exhibit 3, Attachment 1.

¹⁵²See Application, Exhibit 3, Attachment 8; see also Hawaiian Electric Response to PUC-HECO-IR-102. "[B]ased on the production simulation analysis prepared for the Project application, for the years 2022-2041, the Company forecasts that the Project will be charged on average about 60% from fossil fuel resources and 40% from renewable resources from the modeled resources on the system." Id.

¹⁵³Consumer Advocate SOP, Attachment 2 at 4.

¹⁵⁴In re Hawaiian Elec. Co., Inc., et al., Docket No. 2017-0352, Order No. 36187, "Providing Guidance in Advance of

The Commission has also previously indicated its position that standalone energy storage projects that are charged with fossil fuels should be the last resort in meeting capacity needs,¹⁵⁵ as they will have “negative impacts on customers by significantly increasing energy costs and unnecessarily perpetuating reliance on fossil fuels.”¹⁵⁶ The Commission also notes it previously provided explicit guidance to Hawaiian Electric that:

The [Hawaiian Electric Companies] should select projects including renewable generation, renewables paired with storage, and DER from the Grid Services RFP to the greatest extent possible, to ensure that portfolio costs are minimized. While the [C]ommission recognizes the potential value of standalone storage in Phase 2, the [C]ommission remains concerned about the

the Hawaiian Electric Companies’ Phase Draft Requests for Proposals for Dispatchable and Renewable Generation,” filed February 27, 2019, at 10.

¹⁵⁵In re Hawaiian Elec. Co., Inc., et al., Docket No. 2017-0352, Order No. 36356, “Providing Guidance on the Hawaiian Electric Companies’ Phase 2 Draft Requests for Proposals for Dispatchable and Renewable Generation,” filed June 10, 2019 (“Order No. 36356”), at 14 (emphasis added); see also Docket No. 2017-0352, Order No. 36604, “Establishing Performance Incentive Mechanisms for the Hawaiian Electric Companies’ Phase 2 Requests for Proposal,” filed October 9, 2019 (“Order No. 36604”), at 30; In re Public Util. Comm’n, Docket No. 2021-0024, “Notice of Status Conference on Tuesday, March 16, 2021,” filed on March 9, 2021, and “Agenda and YouTube Link for Status Conference on Tuesday, March 16, 2021,” filed on March 11, 2021; and Hawaiian Electric’s and HNEI’s PowerPoint presentations from the Status Conference, “Grid Planning for Modern Power System in Hawaii; AES Retirement Replacement Analysis,” filed on March 23, 2021.

¹⁵⁶Order No. 36604 at 30.

possibility that any standalone storage resources procured may be charged with fossil fuel generation at a significant cost to ratepayers.¹⁵⁷

The Commission recently restated these concerns and others pertaining to the Project's projected benefits in terms of reducing the use of fossil fuels, facilitating the proliferation of renewable generation, and expediting the retirement of existing fossil fuel plants as follows:

Based on [Hawaiian Electric's] proposed plans, even with the addition of the Project, the timing of retiring fossil-fueled plants remains the same and there do not appear to be incremental additions of renewable projects spurred by the new storage capacity. With this addition of a large increment of storage, the Commission would expect the timelines for these actions to all move up, rather than remain the same.¹⁵⁸

Additionally, analysis of the data provided by Hawaiian Electric confirms that the battery system would continue to be charged with oil-fired generation both in the near- and long-term.¹⁵⁹ Replacement of a coal power plant with a flexible grid asset should offer the potential to reduce reliance on fossil fuels, rather than simply substituting generation from one fossil fuel for another. Relatedly, the Commission notes that while the

¹⁵⁷Order No. 36356 at 14-15 (emphasis added).

¹⁵⁸Order No. 37721 at 9.

¹⁵⁹See Order No. 37721 at 9-10.

Project's average estimated RPS impact over the 20-year Term is 0.11%, the projections reflect a declining rate of contributions over the Term.¹⁶⁰ The Commission finds that the minimal contribution with declining trend of supporting the State's RPS goals to be disappointing in light of the significant Project costs.

Accordingly, the Commission reiterates that standalone storage that is charged by fossil fuels is not the preferred method for increasing capacity on the grid and, once again, directs Hawaiian Electric to carefully consider future pursuits of similar standalone storage projects, and directs continued exploration of opportunities to reduce fossil fuel reliance and maximize renewable generation.

Nevertheless, in light of the critical urgency of ensuring that reliable service for customers is provided following the scheduled retirement of the AES coal plant, the Commission approves Hawaiian Electric's Application, as set forth below. However, in light of Hawaiian Electric's appalling failures to consider alternatives to the Project, take into account the customer impacts, and seize the opportunity to move away from reliance on fossil fuels, the Commission is imposing conditions to its approval to address these shortcomings, and ensure that the

¹⁶⁰Application, Exhibit 6.

Project provides benefits to customers. Pursuant to Order No. 37721, the Parties and Participant offered comments and proposed mitigating actions, which are principally discussed below, to address the aforementioned concerns.¹⁶¹ The Commission has taken these into consideration as part of its review of the Application, as well as in developing conditions to approval to mitigate these very serious concerns, which are also discussed in detail in Section III.E.

1.

Material ESPPA Terms And Conditions

a.

Pricing Provision

Lump Sum Payment. As described above, the Lump Sum Payment is payable to Kapolei Energy Storage I on a monthly basis for the right to dispatch the Project's energy storage, based on availability and performance.¹⁶² The monthly Lump Sum Payments total \$23,987,849 per year and equate to \$26,326,904 per year in total revenue requirements.¹⁶³ The Lump Sum Payments are subject to

¹⁶¹See Order No. 37721 at 18-19.

¹⁶²Application, Exhibit 4 at 2 and 5.

¹⁶³Application, Exhibit 1 at 103 and Exhibit 4, Attachment 6 at 1.

adjustment, by means of Liquidated Damages, if the Project does not satisfy the agreed-upon Performance Metrics.¹⁶⁴

The Consumer Advocate notes that the Project's pricing and estimated bill impacts are the highest of the Phase 2 RFP projects.¹⁶⁵ While acknowledging that comparing the Project to other Phase 2 RFP PPAs, in terms of pricing, is not a completely analogous comparison, the Consumer Advocate highlights concern over the near-term estimated bill impacts to customers, particularly in light of the economic difficulties many are facing due to the COVID-19 pandemic.¹⁶⁶

Additionally, while the Consumer Advocate acknowledges that the Project resulted from the competitively bid RFP, it also notes that declining price trends for renewable and storage technologies underscore the importance of assessing "whether the Project reflects reasonable prices, with reasonable returns, which would provide benefits to customers in cost-effective pricing."¹⁶⁷ Further, the Consumer Advocate contends that the information provided by Kapolei Energy Storage I was not adequate to practically determine if the Lump Sum Payments are reasonable based

¹⁶⁴Application, Exhibit 4 at 4-5; Exhibit 1 at 11.

¹⁶⁵Consumer Advocate SOP at 15; see also, id., Attachment 2.

¹⁶⁶Consumer Advocate SOP at 15-17.

¹⁶⁷Consumer Advocate SOP at 19.

on actual or projected Project costs.¹⁶⁸ The Commission strongly shares these concerns.

However, the Consumer Advocate also recognizes that other factors should be considered in evaluating the Project, including but not limited to the significant role the Project plays in the AES Hawaii coal plant retirement and the anticipated reduction in GHG emissions.¹⁶⁹ As a result, the Consumer Advocate does not object to the ESPPA on this basis, but urges Hawaiian Electric to endeavor to provide cost-effective renewable energy resources in the near- and longer-term.¹⁷⁰

Hawaiian Electric asserts that “[l]ong-run avoided energy cost serves as a benchmark against new project pricing to evaluate and assess the reasonableness of the proposed pricing.”¹⁷¹ However, Hawaiian Electric also claims that “[s]ince the planning environment has become increasingly uncertain, the determination of the utility’s ‘true’ avoided costs has become increasingly complex.”¹⁷² In addressing the Consumer Advocate’s inquiries and concerns, Hawaiian Electric provided an estimated levelized cost

¹⁶⁸Application at 19.

¹⁶⁹Consumer Advocate SOP at 21.

¹⁷⁰Consumer Advocate SOP at 17.

¹⁷¹Application, Exhibit 3 at 1.

¹⁷²Application, Exhibit 3 at 1.

per kWh, “utilizing the Lump Sum Payment and an approximation of battery discharge energy by the subject [P]roject.”¹⁷³ However, in so doing, it also argued that “the levelized cost calculations for this [P]roject . . . should not be the sole determining factor of whether a project is reasonable and in the public interest.”¹⁷⁴ Instead, Hawaiian Electric emphasized the ESPPA’s flexibility, capacity, and capabilities, which “will be a critical [consideration] in determining whether the Lump Sum Payment for the Project is reasonable and in the public interest.”¹⁷⁵

Sharing similar concerns, the Commission sought levelized pricing information (\$/kWh) from similar projects proposed by the Hawaiian Electric Companies (i.e., the Keahole BESS and Waena BESS self-build projects.)¹⁷⁶ Hawaiian Electric caveated its response by noting differences in the capabilities and purposes of other currently proposed self-build BESS projects, and argued that comparisons of levelized pricing for standalone battery projects are not applicable, as such projects are not compensated on the basis of generated energy

¹⁷³Hawaiian Electric Response to CA/HECO-IR-22.

¹⁷⁴Hawaiian Electric Response to CA/HECO-IR-22. Hawaiian Electric also notes that the “levelized calculation, however, only provides insight into a portion of the Company’s strategy” for the Stage 2 RFP and achieving a 100% RPS. Id.

¹⁷⁵Hawaiian Electric Response to CA/HECO-IR-22.

¹⁷⁶See Docket Nos. 2020-0127 and 2020-0132.

or on a payment per kWh basis.¹⁷⁷ Instead, Hawaiian Electric provided a comparison based on a levelized dollar per MW basis (“\$/MW”), while relying on the lump sum payments for the Project and revenue requirements from the Keahole and Waena BESS projects:¹⁷⁸

Docket No.	Project	Project Size	Levelized Price (\$/MW)
2020-0136	Kapolei BESS	185 MW/565 MWh	\$1.5M
2020-0132	Waena BESS	40 MW/160 MWh	\$1.7M
2020-0127	Keahole BESS	12 MW/12 MWh	\$2.1M

Hawaiian Electric reiterates that these BESS projects were all selected as part of the Stage 2 RFP “to help the Company achieve the State’s energy goals, as well as to create a grid capable of managing the dynamic future developments of Hawaii’s energy future, as first envisioned in the Commission’s Inclinations.”¹⁷⁹ Also, in support of the Project’s pricing, Plus Power (on behalf of Kapolei Energy Storage I), asserts that:

¹⁷⁷Hawaiian Electric Response to PUC-HECO-IR-114a. Hawaiian Electric indicates “the KES Project will provide load reduce (batter discharge), load build (battery charging, regulating reserves, and [FFR]; the Keahole BESS is a contingency resource providing [FFR] to mitigate system events; and the Waena Bess will provide similar services as the KES Project[,] but without the [FFR] services.” Id.

¹⁷⁸Hawaiian Electric Response to PUC-HECO-IR-114a.

¹⁷⁹Hawaiian Electric Response to PUC-HECO-IR-114a.

[T]he price is favorable for ratepayers and in comparison with the findings of two premier storage analysts: Lazard's \$183 to \$340/kW-Year range of estimated levelized cost of storage for installed 100+ MW front of meter systems and the U.S. Energy Storage Association/Wood Mackenzie's \$1,300-\$2,450/kW expected system installed cost for 4-hour similar-sized storage systems in Q1 2021.¹⁸⁰

While the Commission continues to be troubled by the pricing and near-term bill impacts of the Project, such are not solely dispositive of a determination as to whether the Project is reasonable and in the public interest. In this regard, as the Consumer Advocate notes, HRS § 269-6(b) allows the Commission to "determine that short-term costs or direct costs that are higher than alternatives relying more on fossil fuels are reasonable, considering the impacts resulting from the use of fossil fuels."¹⁸¹ In particular, the Commission notes that the Project has the potential to offer grid services and other benefits that may not

¹⁸⁰In re Pub. Util. Comm'n, Docket No. 2021-0024, Letter from Plus Power to the Commission Re: Docket No. 2021-0024 Opening a Proceeding to Review Hawaiian Electric's Interconnection Process and Transition Plans for Retirement of Fossil Fuel Power Plants; and Docket No. 2020-0136 Application for Approval of Energy Storage Power Purchase Agreement for Energy Storage Services with Kapolei Energy Storage I, LLC, filed on March 25, 2021 (citing Lazard, Levelized Cost of Storage Analysis-Version 6.0, 2020 and Wood Mackenzie Power & Renewables/U.S. Energy Storage Association, U.S. Energy Storage Monitor: 2020 Year in Review Full Report, March 21, 2021). Plus Power filed the same letter in this docket on March 25, 2021, as well.

¹⁸¹Consumer Advocate SOP at 20; see also HRS § 269-6(b).

be offered by other Stage 2 RFP projects. The Commission acknowledges that utility scale storage has the potential to provide flexibility and efficiency on the grid and benefits to ratepayers depending on timing and utilization, as the State moves closer to its renewable goals, and the conditions, discussed in greater detail below, are designed to help ensure that the Project realizes that potential.

Moreover, as stated by Hawaiian Electric, minimal customer savings are anticipated - it is projected that a typical residential Hawaiian Electric ratepayer using 500 kWh per month will save an estimated \$0.28 on electricity payments over the 20-year Term of the ESPPA.¹⁸² When considering the entire portfolio of projects selected in the Stage 2 RFP process on Oahu together,¹⁸³ Hawaiian Electric asserts that the same customer consuming 500 kWh per month could save, on average, approximately \$0.99 per month.¹⁸⁴ Additionally, the portfolio of Oahu projects for years 2024-2041 is estimated to provide a net present value of savings of approximately \$60,092,784.¹⁸⁵

¹⁸²Application at 3 and 11.

¹⁸³According to the Consumer Advocate, when all proposed Oahu projects are modeled together, they result in approximately \$60 million in overall system savings. Consumer Advocate SOP, Attachment 2 at 9.

¹⁸⁴Application at 3 and 11.

¹⁸⁵Application, Exhibit 3 at 4.

Despite these broad considerations, the Commission remains deeply concerned about the very real potential near-term ratepayer impacts of the Project. Furthermore, the Commission remains skeptical of Hawaiian Electric's projected savings from the Project, which remain far into the future and are likely to be elusive, given the lack of clarity regarding Hawaiian Electric's expected utilization of the BESS. The fundamental fact remains that Oahu customers will be obligated to pay the Lump Sum Payments, currently projected at \$23,987,849 per year, for the 20-year ESPPA Term, totaling over \$479 million over the Project lifetime. Furthermore, the annual revenue requirement for the Project is \$26,326,904, saddling ratepayers with over \$500 million in costs over the life of the Project. As discussed herein, Hawaiian Electric has not satisfactorily addressed the Commission's concerns about the Project's benefits and impacts to customers, articulated in Order No. 37721, necessitating the conditions articulated in this D&O to maximize the value of this expensive Project and assure that it can serve far beyond its temporary role as a stopgap following the retirement of the AES coal plant, and serve as a long-term asset for integrating reliable, clean energy resources.

As further discussed below in Section III.E., these conditions include: (1) requiring Hawaiian Electric to forgo seeking any second allocation of the Stage 1 PIM awards related to

Oahu projects, and any potential recovery of the second allocation of the Stage 1 PIM awards for those projects (**Condition No. 1**); (2) directing Hawaiian Electric to unlock grid constraints and align demand-side programs with Project operations (**Condition No. 2**); (3) directing Hawaiian Electric to financially retire Waiau Units 3 and 4, 5 and 6, and Kahe Units 5 and 6, by specified dates certain (**Condition No. 3**); (4) requiring Hawaiian Electric to file monthly reports with the Commission that provide specific details regarding the Project's renewable energy utilization for the month (**Condition No. 4**), which triggers an automatic prudence review of fossil fuel costs incurred if utilization of the Project falls beneath the below-described established thresholds (**Condition No. 5**); and (5) requiring Hawaiian Electric to file Annual Utilization Reports that detail, among other things, the quantification of the generation source charging the Project in each hour of the year, and Missed Guaranteed Project Milestones Reports, including the reasons for any delays in meeting Milestones and ways to prevent such delays in the future (**Condition No. 7**).¹⁸⁶

¹⁸⁶The Commission imposes additional conditions, detailed below in Section III.E., that serve the purpose of more broadly protecting customers, as well.

b.

ESPPA Duration

As noted above, the ESPPA provides for an initial Term of 20 years following the Commercial Operations Date.¹⁸⁷ “Upon expiration of the Term, the ESPPA automatically terminates.”¹⁸⁸

Upon inquiry from the Consumer Advocate, Kapolei Energy Storage I explains that, based on its experience, the 20-year term is the industry norm.¹⁸⁹ Kapolei Energy Storage I further explains that a 15-year term would significantly increase the monthly Lump Sum Payment to make the Project financeable, and a 25-year term could also require an increased monthly Lump Sum Payment due to the potential maintenance required to guarantee capacity beyond 20 years.¹⁹⁰

Furthermore, the Consumer Advocate notes that, regarding the Phase 2 PPA selection and evaluation process, the IO concluded that the PPAs, including this ESPPA, are “reasonable and retain the value of the bidders’ proposals to Hawaiian Electric ratepayers and were the subject of the above-board negotiations, during which

¹⁸⁷Application, Exhibit 4 at 2.

¹⁸⁸Application, Exhibit 4 at 2.

¹⁸⁹Kapolei Energy Storage I Response to CA/KES-IR-3a.

¹⁹⁰Kapolei Energy Storage I Response to CA/KES-IR-3a.

we observed no undue preference or treatment by Hawaiian Electric.”¹⁹¹

Additionally, the ESPPA will automatically terminate upon the expiration of the 20-year Term.¹⁹² This represents an improvement over previous PPAs, which included “evergreen” provisions, under which the PPA would automatically renew upon the expiration of the initial term, without change in contract provisions.¹⁹³ The Consumer Advocate and Commission have expressed concern over such evergreen provisions in the past, which have necessitated Commission-imposed notice requirements.¹⁹⁴ The Commission believes the ESPPA’s move away from such provisions is a notable improvement.

Moreover, the ESPPA duration should not be viewed in isolation from the rest of the terms of the ESPPA. Notably, as discussed above, the Lump Sum Payment is capped pursuant to the terms of the ESPPA and the Performance Metrics could offset the amount of the Lump Sum Payment, thereby limiting the potential cost exposure to Hawaiian Electric customers.

¹⁹¹Consumer Advocate SOP at 22.

¹⁹²See Application, Exhibit 4 at 2.

¹⁹³See In re Hawaiian Elec. Co., Inc., Docket No. 2014-0356, Decision and Order No. 33036, filed on July 31, 2015 (“Order No. 33036”), at 66-68.

¹⁹⁴See Order No. 33036 at 67-70.

As such, combined with the reporting requirements set forth herein, and summarized in Section III.E., the Commission finds that the Term of the ESPPA is reasonable and in the public interest.

c.

Curtailment

Hawaiian Electric purports that, “[a]s a grid-charged resource, standalone storage will be able to utilize renewable energy that would otherwise be curtailed.”¹⁹⁵

With production concentrated in a few hours in the day, grid-connected storage like the [BESS] Project can increase Oahu’s system hosting capacity, allowing more solar to be installed and absorbed by the grid in the middle of the day while avoiding overfrequency events or curtailment of distributed and [] grid-scale solar systems.¹⁹⁶

However, Hawaiian Electric also states that the “addition of this Project is not expected to increase or decrease the system energy contributions of existing must-take, as-available [IPP] facilities[,]”¹⁹⁷ i.e., the Project should not affect curtailment of existing IPPs. Although, Hawaiian Electric further represents that the Project could potentially “utilize

¹⁹⁵Application at 12.

¹⁹⁶Hawaiian Electric Response to PUC-HECO-IR-114a.

¹⁹⁷Hawaiian Electric Response to CA/HECO-IR-24.

some of the energy generation from existing must take, as available [IPP] facilities,” it still notes the Project would be charged from other generating resources on the grid.¹⁹⁸

Upon review, the Commission finds that while the Project is not expected to exacerbate or worsen curtailment issues, Hawaiian Electric’s responses highlight the Commission’s concern that the Company currently intends to utilize fossil fueled-generation in both the near- and long-term to supply energy to the Project. As a result, the Commission imposes a number of conditions, already noted above, and discussed in greater detail in Section III.E., below, to ensure that the Project is not primarily charged with fossil-fueled generation. These include: (1) directing Hawaiian Electric to unlock grid constraints and align demand-side programs with Project operations (**Condition No. 2**); (2) directing Hawaiian Electric to financially retire Waiau Units 3 and 4, 5 and 6, and Kahe Units 5 and 6, by specified dates certain (**Condition No. 3**); (3) requiring Hawaiian Electric to file monthly reports with the Commission that provide specific details regarding the Project’s renewable energy utilization for the month (**Condition No. 4**), which triggers an automatic prudence review of fossil fuel costs incurred if utilization of the Project falls beneath the below-described

¹⁹⁸Hawaiian Electric Response to CA/HECO-IR-24.

established thresholds (**Condition No. 5**); and (4) requiring Hawaiian Electric to file Annual Utilization Reports that describe, among other things, the quantification of the generation source charging the Project in each hour of the year (**Condition No. 7**).

Furthermore, if the Commission determines that IPP renewable facilities are experiencing significant curtailments as a result of the Project, the Commission may investigate this issue as warranted.

d.

Nature Of The ESPPA

The ESPPA is essentially a capacity contract, under which Hawaiian Electric agrees to pay Kapolei Energy Storage I a monthly Lump Sum Payment in exchange for "making the [BESS] available for dispatch by [Hawaiian Electric]." ¹⁹⁹ In this sense, Hawaiian Electric is required to pay the full amount of the monthly Lump Sum Payment, regardless if Hawaiian Electric is capable of dispatching all of the Project's energy, or otherwise fully utilizing the Project's capabilities, during that month.

However, as stated above, the Lump Sum Payment may be offset by Liquidated Damages, which have the potential to reduce

¹⁹⁹Application at 29 (citation omitted); see id. at Exhibit 1.

the Lump Sum Payment down to zero if the Project is completely unavailable or underperforming as measured by the Performance Metrics. As discussed above, the Performance Metrics include: (1) the Capacity Performance Metric, which confirms the Project's ability to discharge energy as required by terms of the ESPPA; (2) the EAF Performance Metric, which determines if the Project is meeting its expected availability; (3) the EFOF Performance Metric, which evaluates whether the Project is experiencing excessive unplanned outages; (4) the RTE Performance Metric, which determines the Project's energy storage efficiency; and (5) the FRR Performance Metric, which evaluates if the Project is meeting the expected FFR performance criteria.²⁰⁰

On the whole, the Commission finds the capacity nature of the ESPPA reasonable under the circumstances, as it is balanced by these Performance Metrics, which will collectively provide benefits to ratepayers, by ensuring that ratepayers will not pay for services or capacity if the Project does not meet its expected capability.

That being said, the Commission has identified a number of concerns relating to the expected use of the Project and its

²⁰⁰Application, Exhibit 4 at 4-5.

operation under the ESPPA,²⁰¹ which it believes are pertinent to evaluating the reasonableness of the ESPPA. The Commission discusses each of these below and, where appropriate, imposes the aforementioned conditions to approval to ensure that this ESPPA results in Project utilization that is in the public interest.

Project's Long-Term Need (Commission Concern No. 1, Order No. 37721). Hawaiian Electric and Kapolei Energy Storage I highlight the Project's fully dispatchable nature, which is asserted to be unique to other Stage 1 and 2 RFP projects.²⁰² Additionally, they cite the Project's ability to provide "grid services such as [FFR], load shifting capacity, primary frequency response, frequency regulation, real-time near instantaneous dispatchability, automatic voltage regulation, reactive power support, grid forming system stabilizing functionality, and blackstart capability."²⁰³ Further:

The Project can be utilized for many different services at different times of the day, month or year to mitigate a multitude of system conditions such as, but not limited to, unexpected outages of other variable resources, low wind or solar conditions, future fossil fuel retirements, transmission

²⁰¹See Order No. 37721.

²⁰²Kapolei Energy Storage I LLC's Comments & Mitigations at 7; see also Application at 2.

²⁰³Hawaiian Electric's Comments, at 7; see Kapolei Energy Storage I's Comments & Mitigations at 10 (also noting the Project's unique ability to blackstart the system due to its location, as compared to the other projects on Oahu).

and distribution system issues, integration of additional distributed energy systems, and integration of additional variable renewable resources that may not have a dedicated storage equipment.²⁰⁴

In contrast, the Consumer Advocate echoes the Commission's identified concern in this area and supports additional review of whether the estimated 350 MW of energy storage to be provided by the Stage 1 and 2 RFP projects can be utilized to meet both near- and long-term grid needs, which may impact the necessity of the Project.²⁰⁵ However, noting the short timeframe of the impending AES Hawaii coal plant retirement, the Consumer Advocate continues to support the Project's approval, subject to the conditions that it recommended in its SOP.²⁰⁶

The Commission appreciates the Parties' and Participant's comments on this issue, and agrees that a critical benefit of the Project is providing near-term capacity to support the retirement of the AES Hawaii coal plant and future retirement of older fossil-fueled generation units. The Commission also notes that this need has been severely exacerbated by the delays in bringing the Stage 1 projects online. However, to ensure that these benefits are realized, the Commission again emphasizes that it

²⁰⁴Hawaiian Electric's Comments at 8; Hawaiian Electric Responses to PUC-HECO-IR-120a.

²⁰⁵See Consumer Advocate Comments at 8-9.

²⁰⁶Consumer Advocate's Comments at 9.

imposes the following conditions to support maximizing customer benefits over the lifetime of the Project, including: (1) requiring Hawaiian Electric to forgo seeking any second allocation of the Stage 1 PIM awards related to Oahu projects, and any potential recovery of the second allocation of the Stage 1 PIM awards for those projects (**Condition No. 1**); (2) directing Hawaiian Electric to unlock grid constraints and align demand-side programs with Project operations (**Condition No. 2**); (3) directing Hawaiian Electric to financially retire Waiau Units 3 and 4, 5 and 6, and Kahe Units 5 and 6, by specified dates certain (**Condition No. 3**); (4) requiring Hawaiian Electric to file monthly reports with the Commission that provide specific details regarding the Project's renewable energy utilization for the month (**Condition No. 4**), which triggers an automatic prudence review of fossil fuel costs incurred if utilization of the Project falls beneath the below-described established thresholds (**Condition No. 5**); and (5) requiring Hawaiian Electric to file Annual Utilization Reports that describe, among other things, the quantification of the generation source charging the Project in each hour of the year (**Condition No. 7**).

Planned or Accelerated New Plant Retirements and Renewable Additions (Commission Concern No. 2, Order No. 37721).

In response to Order No. 37721, Hawaiian Electric commits to retiring its Waiau 3 and Waiau 4 plants when the Stage 1 and 2 RFP

projects, including the instant Project, are on-line, “presumably in 2024.”²⁰⁷ Additionally, Hawaiian Electric represents that the Project will allow for the retirement of Honolulu 8 and 9 fossil fuel units, and indicates the intent to request approval “to establish regulatory assets to record the net book value of the retired assets and to amortize and recover these stranded costs,” consistent with HRS § 269-6(d)(3).²⁰⁸

Hawaiian Electric also states that the Project “will enable faster increases in grid-scale and distributed renewable resources ahead of 2030[,]” and offers the following information in support of this proposition:

As the Project will provide a grid-connected energy storage solution, it will allow the acquisition of renewable resources to include variable renewables without requiring pairing of energy storage. Potential project developers for smaller-scale renewable generation facilities that are contracted on an as-available basis (as opposed to the renewable dispatchable generation contract model that is used for grid-scale projects) could therefore be less concerned with curtailment issues given the Project’s ability to store excess renewable energy delivered to the grid. The Company believes that these renewable sources without paired storage would lead to a more competitive RFP process, lowering the overall cost of future resources while creating more opportunity for wider variety of potential project designs. This includes CBRE projects, new DER programs,

²⁰⁷Hawaiian Electric’s Comments at 2.

²⁰⁸Hawaiian Electric’s Comments at 2 (citations omitted).

and/or grid-scale renewables. Of particular benefit is the Project potentially reducing the cost of CBRE projects (e.g., PV without storage), including [Low and Moderate Income] CBRE projects, where Subscriber Organizations and stakeholders have noted the challenging economic realities of developing such projects.²⁰⁹

Hawaiian Electric further indicates that it will continue to work with the Commission and other stakeholders to identify additional opportunities to accelerate the implementation of renewable energy resources.²¹⁰

Hawaiian Electric also claims that the Project will help to alleviate system level constraints on accelerating renewable energy additions by providing additional "capacity, regulation, and FFR-1 with zero minimum load."²¹¹ Hawaiian Electric states that it plans to increase local or circuit hosting capacity by committing to "accelerating the deployment of autonomous advanced inverter functionality and fast-acting reactive power from static var compensators ('SVC'), gaining increased visibility and control at the circuit level through advance distribution management systems and making traditional equipment upgrades as needed."²¹²

²⁰⁹Hawaiian Electric's Comments at 4-5.

²¹⁰Hawaiian Electric's Comments at 5.

²¹¹Hawaiian Electric's Comments at 3.

²¹²Hawaiian Electric Comments at 3.

Finally, Hawaiian Electric underscores its commitment to ongoing efforts to procure 110 MW of grid services on Oahu “to manage impacts from project and reliability risks of retiring the AES Hawaii coal plant.”²¹³ This includes 60 MW through the Oahu grid services RFP and 50 MW through the Bring Your Own Device and Rooftop Rental grid services programs.²¹⁴

To ensure that these system level constraints on accelerating renewable energy additions are lifted as Hawaiian Electric describes, the Commission imposes the aforementioned **Condition No. 2** to direct Hawaiian Electric to unlock grid constraints and align demand-side programs with Project operations, as detailed below.

Separate from the discussion of hosting capacity and system level constraints, above, the Commission has concerns with Hawaiian Electric’s “commitment” to retiring fossil fuel plants, particularly because the commitment does not set a definitive timeline with negative consequences for delay. Rather, the Company’s timeline embeds a delay for retirement of the Waiau Units 3 and 4, and the Commission notes that the Honolulu plant units were previously deactivated in 2014. The Commission wholeheartedly supports the accelerated retirement of fossil fuel

²¹³Hawaiian Electric Comments at 5.

²¹⁴Hawaiian Electric Comments at 5-6.

plants and given the above concerns, the Commission establishes firm dates for financial retirement of these fossil fuel plants based on the timelines provided in the Application to ensure that these represented benefits of the Project are realized and justify the full 20-year Term of the ESPPA, as reflected in the aforementioned **Condition No. 3**.

Continued Utilization of Fossil-Fuel Generation to Charge the Project (Commission Concern No. 3, Order No. 37721).

While not specifically addressing fossil-fuel usage of the Project itself, Hawaiian Electric submits that the Project will help reduce overall fossil fuel usage in a variety of ways. First, as previously mentioned, Hawaiian Electric states that the Project will facilitate the retirement of Waiau Units 3 and 4 and Honolulu Units 8 and 9.²¹⁵ Hawaiian Electric also states that “[s]caling back fossil fuel use after the addition of the Stage 1 and 2 projects, including the subject Project, along with increased additions from [DER] and demand response programs, will allow fossil fueled units to be progressively removed from daily service, and be deactivated or eventually retired from service.”²¹⁶

Second, the Company states that its long-term resource plans are changing, and that prior plans calling for four new

²¹⁵Hawaiian Electric’s Comments at 2 and 7.

²¹⁶Hawaiian Electric Comments at 8.

combined cycle fossil-fueled units have been replaced with a new preliminary plan that does not forecast the need for these new fossil fuel units, and instead relies upon “incremental additions of new renewable projects, including renewables (grid-scale and distributed) that will increase the utilization of the Project[.]”²¹⁷ Thus, Hawaiian Electric states that it expects the Project will “incrementally reduce future firm capacity needs.”²¹⁸

Similarly, Kapolei Energy Storage I also notes the Project’s potential to enable procurement of more renewable energy and greater integration of DERs, both of which will enable the retirement of existing fossil fuel plants.²¹⁹

After reviewing these comments, the Commission is still left with concerns about the risk of the Project’s fossil fuel usage. The comments repeat rationales and expected benefits of the Project, including facilitating increasing amounts of renewable energy onto Hawaiian Electric’s system and facilitating the retirement of existing fossil fuel plants, but in the case of Hawaiian Electric’s comments, offer little in the way of firm commitments. As a result, to ensure that the renewable energy benefits represented by the Parties are realized, the Commission

²¹⁷Hawaiian Electric Comments at 9.

²¹⁸Hawaiian Electric Comments at 9.

²¹⁹See Kapolei Energy Storage I Comments & Mitigation at 11-13.

imposes monthly reporting requirements requiring specific details regarding the Project's renewable energy utilization for the month (**Condition No. 4**), which triggers an automatic prudence review of fossil fuel costs incurred if utilization of the Project falls beneath the below-described established thresholds (**Condition No. 5**), as described below in Section III.E. As noted above, the Commission also imposes **Condition No. 2** to direct Hawaiian Electric to unlock grid constraints and align demand-side programs with Project operations, as well as **Condition No. 3**, to establish firm dates for financial retirement of Waiau Units 3 and 4, 5 and 6, and Kahe Units 5 and 6.

2.

Land Use

According to Hawaiian Electric, the Project will be situated on approximately 7.5 acres of land in Kapolei, on the island of Oahu, identified by TMK No. (1)9-1-014-042, which is located at 91-400 Malakole Street (west of Kalaeloa Boulevard within the Kapolei Harborside Industrial Project).²²⁰

As part of its RFP proposal, Kapolei Energy Storage I submitted an Options Agreement to demonstrate that Kapolei Energy Storage I and/or its owners have land rights with respect to

²²⁰Application at 1 and 20; Exhibit 1 at Attachment A.

the Project.²²¹ Kapolei Energy Storage I claims that the Project is sited on previously disturbed industrial zoned (I-2) land that allows for intensive uses where not all permits are required.²²²

According to the Project website, the Project is not located in the State of Hawaii Coastal Zone, Special Management Area, Shoreline Setback Area, or the State's Conservation district.²²³ The Project site's State Land Use Designation is Urban and there are no areas onsite mapped as Agricultural Lands of Importance to the State of Hawaii or designated as Important Agriculture Land.²²⁴

Additionally, a preliminary environmental assessment was conducted on the site by Owens Engineering, and no current or historical Recognized Environmental Conditions associated with the subject property was found; "nor were any current historical Recognized Environmental Conditions with the potential to impact the use or value of the subject property identified at any adjacent

²²¹See Kapolei Energy Storage I Response to CA/KES-IR-2a.

²²²Kapolei Energy Storage I Response to CA/KES-IR-2b.

²²³"Project Summary and Community Outreach Plan," Kapolei Energy Storage website ("Project Summary & Comm. Plan"), available at:

[https://static1.squarespace.com/static/5ebc8e0b2fc8c3019485e190/t/5ee2dfdd5579c40433605bfc/1591926751646/2020-06-11 KES Community-Outreach-Plan.pdf](https://static1.squarespace.com/static/5ebc8e0b2fc8c3019485e190/t/5ee2dfdd5579c40433605bfc/1591926751646/2020-06-11+KES+Community-Outreach-Plan.pdf).

²²⁴Project Summary & Comm. Plan.

or nearby properties within 0.5 miles.”²²⁵ Kapolei Energy Storage I does not anticipate that the Project will have any impact on the local air quality due to the lithium-ion batteries being odorless and emission-less systems that operate without CO₂, CO, NO_x or SO_x emissions.²²⁶ Moreover, Kapolei Energy Storage I indicates that, pursuant to a 2006 Archaeological Inventory Survey, “[n]o surface cultural material, historic artifacts, or archaeological sites were identified within the [P]roject boundary.”²²⁷

Under the ESPPA, Kapolei Energy Storage I is responsible for obtaining, at its expense, any and all necessary permits, government approvals, and land rights for the construction and operation of the Project.²²⁸ Although Kapolei Energy Storage I has not yet obtained all the necessary approvals for the Project, the Commission acknowledges Kapolei Energy Storage I’s representations regarding identifying those government permits or approvals it needs to construct the Project and the timeline of when it expects these permits or approvals to be completed, which, if not already obtained, are expected to be secured in 2021.

²²⁵Project Summary & Comm. Plan.

²²⁶Project Summary & Comm. Plan.

²²⁷Project Summary & Comm. Plan.

²²⁸Application, Exhibit 4 at 7-8; Exhibit 1 at Article 10.1-10.3.

Further discussion on the outstanding permits required for the Construction of the Project are discussed in Section III.C.5., below.

3.

Greenhouse Gas Emissions

In the Application, Hawaiian Electric estimates that "the [Project] has the potential to displace about 6,599,495 barrels of fossil fuel over the term of the ESPPA."²²⁹ Hawaiian Electric further states that the BESS "is anticipated to have a positive impact by decreasing Hawaiian Electric's future dispatch of oil-fueled units even though it does not provide any generation capability itself, due to the ability to provide the capacity and other grid services typically received from these oil-fueled units."²³⁰

²²⁹See Application at 4; see also, id., Exhibit 3, which provides a "Project Benefits Analysis" that quantifies the benefits of the Project using a production simulation computer program called PLEXOS to simulate how the system will operate without the Project ("Base Case") and with the Project ("Alternate Case"). Specifically, Hawaiian Electric projects that the Project will allow the Company to avoid consuming 1,674,231 barrels of low sulfur fuel oil, 570,690 barrels of diesel fuel, and 4,354,574 barrels of ultra-low sulfur diesel, and increase consumption of coal by 176,575 tons and biodiesel by 4,484 barrels for the Oahu system.

²³⁰Application at 11-12.

Hawaiian Electric explains that the ESPPA reduces customer exposure to volatility in fuel prices by reducing fossil fuel consumption.²³¹ As discussed above, the Project can be used to meet grid needs during times of high demand or when renewable generation is unavailable, thereby displacing the need to dispatch fossil fuel units, with optimized economic dispatch of available generating resources.

Despite these assertions, Hawaiian Electric's analyses in support of the Application indicate that its current short- and long-term plans would primarily utilize fossil fuels to supply the Project. The Commission has not found Hawaiian Electric's commitments and responses to this concern adequate in this regard, especially when customers will be required to pay over \$500 million for the Project. As a result, the Commission imposes the above-referenced conditions, discussed in more detail below, addressing Hawaiian Electric's fossil fuel utilization, including: (1) directing Hawaiian Electric to unlock grid constraints and align demand-side programs with Project operations (**Condition No. 2**); (2) directing Hawaiian Electric to financially retire Waiau Units 3 and 4, 5 and 6, and Kahe Units 5 and 6, by specified dates certain (**Condition No. 3**); (3) requiring Hawaiian Electric to file monthly

²³¹Application at 13.

reports with the Commission that provide specific details regarding the Project's renewable energy utilization for the month (**Condition No. 4**), which triggers an automatic prudence review of fossil fuel costs incurred if utilization of the Project falls beneath the below-described established thresholds (**Condition No. 5**); and (4) requiring Hawaiian Electric to file Annual Utilization Reports that describe, among other things, the quantification of the generation source charging the Project in each hour of the year (**Condition No. 7**).

a.

GHG Emissions Analysis

Lifecycle GHG Emissions. Hawaiian Electric's GHG Analysis is included as Exhibit 5 to the Application ("GHG Analysis").²³² The GHG Analysis considers three stages in the lifecycle assessment of GHG emissions associated with the Project: (1) the upstream stage, which includes emissions attributed to raw material extraction, manufacturing, material transportation, and project construction; (2) the operations stage, which includes emissions caused by operation and maintenance of the Project; and (3) downstream stage, which includes emissions associated with transportation and

²³²See Application, Exhibit 5.

decommissioning and disposal of Project materials.²³³ The results of Ramboll's lifecycle GHG Analysis are summarized below.²³⁴

Project Stage		GHG Intensity (kg CO ₂ e/MWh)		
		Full Project	T&D Infrastructure	Storage
Upstream	Raw Materials Extraction & Manufacturing	27	0.57	26
	Transportation	0.36	0.042	0.32
	Construction	0.082	0.046	0.036
Project Operations	Operations & Maintenance	0.23	0.23	
Downstream	Transportation	0.068	0.0030	0.065
	Decommissioning & Disposal	2.7	0.023	2.7
Total Project Lifecycle		30		
Project Stage		GHG Emissions (MT CO ₂ e)		
		Full Project	T&D Infrastructure	Storage
Upstream	Raw Materials Extraction & Manufacturing	106,067	2,238	103,829
	Transportation	1,429	164	1,265
	Construction	322	180	143
Project Operations	Operations & Maintenance	926	926	
Downstream	Transportation	269	12	257
	Decommissioning & Disposal	10,658	90	10,568
Total Project Lifecycle		119,671		

²³³Application, Exhibit 5 at 6-10.

²³⁴For all information involving calculated data, Ramboll provided underlying inputs, assumptions, calculations, formulas, and references in an Excel-compatible spreadsheet file "Kapolei Energy Storage GHG Analysis.xlsx." See GHG Analysis at 16.

Avoided GHG Emissions. In addition to estimating lifecycle GHG emissions, Ramboll estimated Avoided Emissions by projecting the GHG emissions of fossil fuels on the Hawaiian Electric system from years 2022 to 2041 that would otherwise occur if the Project was not built.²³⁵ Net emissions are also presented in Ramboll's analysis and are calculated as Avoided Emissions from fossil fuels plants less the emissions from the Project.²³⁶ In its Avoided Emissions analysis:

Ramboll focused solely on direct (stack) emissions since those emissions alone are significantly higher than those of the Project, represent the majority of projected GHG emissions from avoided fuel consumption if the Project were not built, and demonstrate the benefits of the emissions. Thus it was concluded that the further inclusion of indirect GHG emissions from the fossil fuel sources (upstream, operations, or downstream) to the avoided cases was unnecessary.

Avoided Lifecycle GHG Emissions and Avoided Operations GHG Emissions were assumed to be equal and were calculated based on the combustion emissions of the fuel that would be consumed if the Project were not built. This approach does not quantify upstream emissions associated with producing and transporting the fossil fuels; indirect operations emissions such as those incurred by the combustion of fossil fuel by vehicles associated with plant maintenance and operations or auxiliary power uses needed for the operation of the fossil fuel electricity generation units or the administration of

²³⁵Application, Exhibit 5 at 10.

²³⁶Application, Exhibit 5 at 12.

these units; or downstream emissions associated with decommissioning of the fossil fuel electrical generation units. These excluded categories of GHG emissions, if included, would serve to further increase the overall Avoided GHG emissions, resulting in a higher Net GHG emissions reduction.²³⁷

The results of the Avoided and Net GHG Emissions analysis are presented in the tables below.²³⁸

	Avoided GHG Intensity (kg CO ₂ e/MWh)	Avoided GHG Emissions (MT CO ₂ e)
Avoided Operations	696	2,743,393
Avoided Lifecycle	696	2,743,393

	Net GHG Intensity Reduction (kg CO ₂ e/MWh)	Net GHG Emissions Reduction (MT CO ₂ e)
Net Operations	696	2,742,467
Net Lifecycle	666	2,623,722

After review of the record, the Commission has significant concerns with projected lifecycle and avoided emissions that are based on the average mix of energy on the Oahu electric grid. This assumption is inconsistent with principles of least-cost economic dispatch of an electric power system. This concern speaks more fundamentally to Hawaiian Electric's

²³⁷Application, Exhibit 5 at 11.

²³⁸Application, Exhibit 5 at 17-18 (citations omitted).

current plans to primarily utilize fossil fuels to charge the Project, which are not directly reflected in the GHG Analysis. Moreover, Hawaiian Electric's estimate of significant "avoided" GHG emissions is contradicted by the Company's updated fuel consumption analysis provided in response to PUC-HECO-IR-121.

As noted above, in its Application, Hawaiian Electric represents that "the [Project] has the potential to displace about 6,599,495 barrels of fossil fuel over the term of the ESPPA."²³⁹ In contrast, as part of its supplemental response to PUC-HECO-IR-121 (filed under confidential seal), Hawaiian Electric's updated estimates directly contradict the representations made in the Application.²⁴⁰ These conflicting estimates do not instill confidence in the underlying analysis.

Nevertheless, given the urgent need to address near-term capacity shortfalls arising from the retirement of the AES Hawaii coal plant, the Commission is addressing this concern through the conditions, discussed further below, to prioritize renewable utilization in the storage system

²³⁹See Application at 4; see also, id., Exhibit 3.

²⁴⁰See Letter From: K. Katsura To: Commission Re: Docket No. 2020-0136, Hawaiian Electric Energy Storage Power Purchase Agreement for Energy Storage Services with Kapolei Energy Storage I, LLC; "Supplemental Responses to Commission Information Requests," filed April 23, 2021. Hawaiian Electric's updated fuel consumption estimates are provided in Attachment 3 (filed under confidential seal).

(i.e., **Condition Nos. 2, 3, 4, 5, and 7**), which will have a significant impact on the lifetime GHG reductions from the Project.²⁴¹

b.

End Of Life Treatment

In contrast to the upstream and operational GHG emissions analysis, the inputs and assumptions Hawaiian Electric used for downstream emissions are not specific. The GHG Analysis provides many possible disposal options for every Project component, "including landfill, incineration, and recycling,"²⁴² but the GHG Analysis does not specify which components will be repurposed, recycled, incinerated, or landfilled.²⁴³

The Consumer Advocate raises concerns with the ambiguity of totals for operational and lifecycle GHG emissions, as well as with the downstream GHG Analysis, noting that there is "some ambiguity regarding the end of life treatment for equipment for

²⁴¹As discussed in Section III.E., below, Hawaiian Electric will be required to charge the Project with greater amounts of renewable energy than is otherwise modeled under the average mix of energy assumed by Ramboll, which should translate into even greater GHG benefits than presented in Hawaiian Electric's GHG Analysis.

²⁴²Application, Exhibit 5 at 10.

²⁴³See Application, Exhibit 5 (emphasis added).

[Transmission and Distribution] Infrastructure that would impact downstream GHG emissions.”²⁴⁴

Hawaiian Electric argues that Kapolei Energy Storage I already provided a general decommissioning plan in response to PUC-KES-IR-101.²⁴⁵ Hawaiian Electric further argues that decommissioning plans will continue to be refined throughout the Project’s development and “require an assessment of the Company’s need for the interconnection facilities and the environmental laws in effect at the time of decommissioning, and thus cannot be committed to prior to the Project’s development and construction.”²⁴⁶ The Consumer Advocate takes note of Hawaiian Electric’s stated position in other Stage 2 RFP projects that decommissioning plans will continue to be refined throughout the Project’s development and “require an assessment of the Company’s need for the interconnection facilities at the time of decommissioning.”²⁴⁷

Kapolei Energy Storage I explains that it will develop an end-of-life management plan for the equipment closer to the end

²⁴⁴See Consumer Advocate SOP at 35 (noting concerns with proxies for project-specific data and plans for end-of-life treatment).

²⁴⁵Hawaiian Electric Reply SOP at 14.

²⁴⁶Hawaiian Electric Reply SOP at 14.

²⁴⁷Hawaiian Electric Reply SOP at 37 (citation omitted).

of the Term, as more information on the treatment of similar facilities becomes available.²⁴⁸ Generally, it plans to deconstruct the BESS, repurpose any batteries with significant residual life and repurpose, recycle, or dispose of all equipment in accordance with applicable regulations in effect at that time.²⁴⁹

The Commission is aware that the policies and related industries for managing the end-of-life treatment of photovoltaic and storage projects are still maturing.²⁵⁰ While the Commission recognizes the challenges of planning for decommissioning that is 20 years away, the Commission believes that a more detailed plan for end-of-life treatment (i.e., repurposing, recycling, incineration, and/or landfilling) for all Project equipment would help ensure that strategies are in place to safely and cost-effectively handle these materials at end-of-life with minimal environmental GHG impacts. It would also allow for a more thorough assessment of downstream GHG emissions.

Therefore, the Commission finds it reasonable and in the public interest to impose **Condition No. 8**, also as recommended by the Consumer Advocate, which requires Hawaiian Electric to work

²⁴⁸Response to PUC-KES-IR-101b.

²⁴⁹Response to PUC-KES-IR-101d.

²⁵⁰See, e.g., Recycling and Disposal of Battery-Based Grid Energy Storage Systems :a Preliminary Investigation, Electrical Power Research Institute (December 2017), available at <https://www.epri.com/research/products/000000003002006911>.

with Kapolei Energy Storage I to develop a comprehensive end-of-life management plan for the Project's components. This plan should provide the end-of-life treatment for each Project component, the expected cost of this treatment, and any third parties expected to provide this service. Given the speculative nature of this plan and the nascent nature of policies of storage projects, the Commission will give Hawaiian Electric five years from the date of this D&O to file such plan.

4.

Community Outreach

Under the RFP, Kapolei Energy Storage I was required to develop a comprehensive community outreach and communications plan to inform the public and garner support for the Project.²⁵¹ Accordingly, Kapolei Energy Storage I held a virtual public meeting on July 14, 2020, to inform the community about the Project.²⁵² Exhibit 8 of the Application contains a summary of Kapolei Energy Storage I's community outreach efforts and all written comments it received as of the date the Application was filed.²⁵³

²⁵¹Application at 24.

²⁵²Application at 24; Exhibit 8 at 1.

²⁵³Application at 25; see generally, Exhibit 8.

Kapolei Energy Storage I states that, as part of its community outreach efforts, it conducted informational briefings on the Project with multiple groups and individuals, including participating in a series of meetings with the Makakilo/Kapolei/Honokai Hale Neighborhood Board #34 ("Neighborhood Board #34"), which resulted in Neighborhood Board #34's unanimous support for the Project.²⁵⁴ Additionally, Kapolei Energy Storage I indicates that it is not aware of any petitions or efforts to oppose the Project.²⁵⁵ Similarly, in its SOP, Kapolei Energy Storage I states that the Project is well-supported in the local community.²⁵⁶ The Commission

²⁵⁴Kapolei Energy Storage I Response to CA/KES-IR-4a, wherein Kapolei Energy Storage I further states that, in addition to directly meeting with various stakeholder and community organizations and individuals, it also conducted community outreach through indirect means including news articles in multiple media outlets, media advisories, social media, websites, and television. Id.

²⁵⁵Kapolei Energy Storage I Response to CA/KES-IR-5.

²⁵⁶Kapolei Energy Storage I SOP at 13. In addition to the aforementioned support for the Project by Neighborhood Board #34, letters of support for were also provided by the area State Senator, Mike Gabbard, Ulupono Initiative, Kauai Island Utility Cooperative, and Kapolei Properties, LLC. See id. at 14 and Exhibit 8 at 2-8. See also Letter from Senator Glenn Wakai to the Commission, filed on April 4, 2021 (stating the Senator's support for the Project); Letter from Aina Nui Corporation, Kapolei Properties LLC, Affiliates of the James Campbell Company LLC, filed on April 7, 2021 (providing comments in support of the Project and requesting the Commission's favorable consideration of the Application); and Letter from the Land Use Research Foundation, filed on April 9, 2021 (indicating support and urging the Commission's consideration and approval of Project).

notes these statements from Kapolei Energy Storage I, as well as the public comments and letters of support that Kapolei Energy Storage I states that it has received, not because they are dispositive regarding the Commission's decision here, but simply as indicators of the level of community interest in and awareness of this Project.

Furthermore, pursuant to Article 27.17(c) of the ESPPA, Kapolei Energy Storage I indicates that it solicited public comments on the Project through an advertisement published in the Honolulu Star Advertiser on January 18, 2021.²⁵⁷

Kapolei Energy Storage I indicates that its community outreach efforts are ongoing and that it "continues to work with individual and organizational networks to seek out and identify interested stakeholders and offer complete project briefings and site visits."²⁵⁸ However, it also does not enumerate any specific meetings or efforts subsequent to the filing of the Application in this docket. That being said, Kapolei Energy Storage I maintains that its efforts continue through the creation of a dedicated email address to receive comments and questions, the introduction of

²⁵⁷Kapolei Energy Storage I Response to PUC-KES-IR-103b; see also Application, Exhibit 1 at 86 (requiring the Seller to solicit public comments a second time after Hawaiian Electric's submittal of the Application to the Commission).

²⁵⁸Kapolei Energy Storage I Response to CA/KES-IR-4a and CA/KES-IR-4d.

frequently asked questions on its Project website, as well as a comments box to receive questions and concerns from the public.²⁵⁹ Additionally, Kapolei Energy Storage I obtained added publicity on the Project through an article featured in the November 2020 issue of "go Kapolei Magazine," a publication distributed within the Kapolei area.²⁶⁰

Ultimately, the Commission believes effective community outreach is essential to achieving the State's clean energy goals and emphasizes the importance of community engagement for this and future ESPPAs. Accordingly, after review of the entirety of Kapolei Energy Storage I's efforts to engage and reach out to the community, the Commission finds and concludes that Kapolei Energy Storage I has met the requirements related to community outreach in both the RFP and ESPPA. That being said, the Commission expects Kapolei Energy Storage I to continue outreach efforts,²⁶¹ throughout the life of the Project. In this regard, the conditions imposed by this D&O, described in further detail below in Section III.E., offer an opportunity to engage with the community to re-visit and explain the expected benefits of the Project, and how interested members of the public may follow the Project's

²⁵⁹Kapolei Energy Storage I Response to CA/KES-IR-4d.

²⁶⁰Kapolei Energy Storage I Response PUC-KES-IR-103a.

²⁶¹See Kapolei Energy Storage I Response to PUC-KES-IR-107a.

operation. The Commission also expects Kapolei Energy Storage I to consider additional opportunities to expand public engagement, such as through the development of partnerships with area schools, businesses, and organizations within the community at large.

5.

Permitting and Approvals Needed from Other Government Agencies

Pursuant to the ESPPA, Kapolei Energy Storage I is required, at its own expense, to obtain “any and all Government Approvals required for the construction, ownership, operation and maintenance of the [Project] and the interconnection of the [Project] to the [Hawaiian Electric] System.”²⁶² Additionally, Kapolei Energy Storage I is required, at its own expense, to obtain “any and all Land Rights required for the construction, ownership, operation and maintenance of the [Project] on the Site and the interconnection of the [Project] to the [Hawaiian Electric] System.”²⁶³

As noted above, Kapolei Energy Storage I has identified certain specific permits and/or approvals that are needed from State and/or County agencies related to construction of the Project, and represents that a decision regarding those

²⁶²Application, Exhibit 1 at 35.

²⁶³Application, Exhibit 1 at 35, § 10.1; Exhibit 4 at 8.

governmental approvals that have not yet been obtained are expected in 2021,²⁶⁴ as reflected in the table below:²⁶⁵

Permit	Department	Expected Approval
Conditional Use Permit ("CUP") - Minor	City and County of Honolulu, Department of Planning and Permitting	Approved ²⁶⁶
Grading and Grubbing and/or Stockpiling Permit	City and County of Honolulu, Department of Planning and Permitting	9/1/2021
Building Permit	City and County of Honolulu, Department of Planning and Permitting	9/1/2021
NPDES Construction Stormwater Permit	State of Hawaii Department of Health, Clean Water Branch	9/1/2021

²⁶⁴Response to CA/KES-IR-2b.

²⁶⁵Response to CA/KES-IR-2b.

²⁶⁶Project Summary & Comm. Plan (noting that the CUP was approved on October 21, 2019).

Additionally, Kapolei Energy Storage I has represented that there are no major impacts to report to the State Department of Transportation; it will submit final drawings to the Honolulu Fire Department, as a condition to CUP approval; and it will coordinate with the landowner for access to the Project site consistent with the Kapolei Harborside Roadway Master Plan.²⁶⁷

Ultimately, the ESPPA requires Kapolei Energy Storage I to “obtain, at its expense, any and all Governmental Approvals required for the construction, ownership, operation and maintenance of the [Project] and the interconnection of the [Project] to the [Hawaiian Electric] System.”²⁶⁸ In the event Kapolei Energy Storage I fails to obtain the necessary Governmental Approvals, the ESPPA provides for the assessment of damages against Kapolei Energy Storage I and in favor of Hawaiian Electric,²⁶⁹ which protects Hawaiian Electric’s customers from any potential negative effects related to permitting or other Governmental Approvals.

Specifically, pursuant to the ESPPA, Kapolei Energy Storage I is required to pay DDDs to Hawaiian Electric if

²⁶⁷Project Summary & Comm. Plan.

²⁶⁸Application, Exhibit 1 at 35, § 10.1. “Government Approvals” include but are not limited to all permits and approvals issued by Governmental Authorities. Id. at 100.

²⁶⁹Application, Exhibit 1 at 39-40, Article 11.6.

Kapolei Energy Storage I misses a Guaranteed Project Milestone (other than the Commercial Operations Date).²⁷⁰

The Commission finds that having these delay provisions in the ESPPA are reasonable in light of Hawaii's mandated RPS goals,²⁷¹ and the Commission expects Hawaiian Electric to hold Kapolei Energy Storage I accountable for its responsibilities and making diligent progress to complete the Project according to the timeline contemplated by the Application. Accordingly, the Commission finds that the outstanding permitting approvals from other governmental agencies are satisfactorily addressed by the ESPPA and through Hawaiian Electric and Kapolei Energy Storage I's representations.

²⁷⁰Application, Exhibit 1 at 39-40, which further provides that Hawaiian Electric has the right to terminate the ESPPA in the event Kapolei Energy Solar I has not achieved a Guaranteed Project Milestone (other than the Commercial Operations Date) within 180 days of such Guaranteed Project Milestone Date. The Commission imposes **Condition No. 7**, requiring the Missed Guaranteed Project Milestones Report, so that the Commission stays informed regarding any Milestone timing developments related to the Project.

²⁷¹See, e.g., HRS § 269-92(a).

However, the Commission also finds that the ESPPA contemplates situations where the DDDs might be paid from Kapolei Energy Storage I to Hawaiian Electric prior to the Commercial Operations Date and the associated Lump Sum Payment.²⁷²

According to the ESPPA, the Lump Sum Payment commences on the Commercial Operations Date. As such, it is possible that DDDs could be paid from Kapolei Energy Storage I to Hawaiian Electric prior to the commencement of the Lump Sum Payment, in the event Guaranteed Project Milestones are not met before the Commercial Operations Date. Under these circumstances, if DDDs are assessed, they would not be offset by Hawaiian Electric's Lump Sum Payment, because the date to begin the Lump Sum Payments (commencing with the Commercial Operations Date) would not yet have occurred.

²⁷²See Application, Exhibit 1 at 39-40. As noted above, the ESPPA identifies the "Guaranteed Commercial Operations Date" of June 1, 2022. Id., Exhibit 1 at 182.

According to the ESPPA, DDDs are payable on a monthly basis from the "Development Period Security."²⁷³ Furthermore, "[i]f the Development Period Security is at any time insufficient to pay the amount of the draw to which [Hawaiian Electric] is then entitled, [Kapolei Energy Storage I] shall pay any such deficiency to [Hawaiian Electric] promptly on demand."²⁷⁴

As such, the Commission imposes **Condition No. 9:** to the extent that DDDs are paid to Hawaiian Electric prior to commencement of the Lump Sum Payment, Hawaiian Electric shall credit the amount of the DDDs received to its ratepayers through the PPAC.

D.

Hawaii's Energy Policy Statutes

The State of Hawaii has adopted several energy policies requiring and/or encouraging reduction in the utilization of fossil fuels in statutes that directly pertain to the regulation of public utilities, as discussed further, below.

²⁷³Application, Exhibit 1 at 40, § 11.7.

²⁷⁴Application, Exhibit 1 at 40, § 11.7.

Contribution To State Energy Goals

The Commission notes Hawaiian Electric's statement that "[t]he energy to be dispatched from the [Project] pursuant to the ESPPA will assist Hawaiian Electric in achieving the State of Hawaii's RPS goals even though the [Project] does not provide any generation capability itself."²⁷⁵ Additionally, Hawaiian Electric estimates that, while variable, the Project has the potential to contribute, on average over the Term of the Project, 0.11% to the Oahu RPS and 0.09% to Hawaiian Electric Companies' consolidated RPS.²⁷⁶ While the Commission believes that this contribution could have been significantly higher, particularly in light of the Project's high costs, it nonetheless recognizes these contributions to the State's RPS, and has bolstered these contributions through the imposition of conditions that strongly encourage more ambitious renewable energy contributions from the Project, including: (1) directing Hawaiian Electric to unlock grid constraints and align demand-side programs with Project operations (**Condition No. 2**); (2) directing Hawaiian Electric to financially retire Waiau Units 3 and 4, 5 and 6, and Kahe Units 5 and 6, by specified dates certain (**Condition No. 3**); (3) requiring

²⁷⁵Application at 12.

²⁷⁶Application, Exhibit 6; see also HRS § 269-92.

Hawaiian Electric to file monthly reports with the Commission that provide specific details regarding the Project's renewable energy utilization for the month (**Condition No. 4**), which triggers an automatic prudence review of fossil fuel costs incurred if utilization of the Project falls beneath the below-described established thresholds (**Condition No. 5**); and (4) requiring Hawaiian Electric to file Annual Utilization Reports that describe, among other things, the quantification of the generation source charging the Project in each hour of the year (**Condition No. 7**).

2.

HRS § 269-6

HRS § 269-6(b) provides, in relevant part:

The [Commission] shall consider the need to reduce the State's reliance on fossil fuels through energy efficiency and increased renewable energy generation in exercising its authority and duties under this chapter. In making determinations of the reasonableness of the costs of utility system capital improvements and operations, the [C]ommission shall explicitly consider, quantitatively or qualitatively, the effect of the State's reliance on fossil fuels on price volatility, export of funds for fuel imports, fuel supply reliability risk, and greenhouse gas emissions.

The Commission recognizes the importance of considering the effects that Hawaii's reliance on fossil fuels has on the

State's economy and general welfare in making utility resource planning, investment, and operation decisions. In performing the duties specified in HRS Chapter 269, the Commission has been diligent in implementing the State's energy policies and statutes, giving deliberate weight to these provisions in the broader context of the many other statutes and considerations necessary to regulate and provide universal, reliable, and affordable access to essential electric utility services.²⁷⁷

The Commission has largely discussed the specific criteria provided in HRS § 269-6(b) (price volatility, export of funds for fuel imports, fuel supply reliability risk, and GHG emissions) in more detail above. The Commission notes that Hawaiian Electric has made representations that the Project will provide a hedge against fossil fuel price volatility;²⁷⁸ lower the forecasted quantity of fuel consumption;²⁷⁹ decrease the amount of

²⁷⁷Some of these broader considerations (such as monetary costs) are obvious, while others are explicitly stated or implied elsewhere in statutes, and/or specified in case law in which the courts have set forth standards and interpretations regarding the determination of just and reasonable rates, which collectively include: reliability, affordability, fairness, provision of just and reasonable compensation for utility investment, and provision of just and reasonable rates to utility customers.

²⁷⁸Hawaiian Electric Response to CA/HECO-IR-20 (noting that, as prices have fluctuated significantly in the past 10 years, the fixed price structure shields customers from the impact of future price fluctuations).

²⁷⁹Hawaiian Electric Response to CA/HECO-IR-20.

funds expended for fuel imports;²⁸⁰ reduce fuel supply reliability risk due to the likely decline of overall fuel supply requirements based on the to the conversion to a 100% renewable future;²⁸¹ and reduce GHG emissions.²⁸²

However, as discussed above, and in Order No. 37721, the Commission remains skeptical of Hawaiian Electric's representations, and has imposed conditions, including the ones listed in the foregoing subsection, to ensure that Hawaiian Electric's fossil fuel consumption will be reduced, and that the Project will not be utilized as a primarily fossil-fueled resource.

In light of the above the Commission concludes that when considered in conjunction with the conditions of approval established herein, the ESPPA is reasonable from the perspective of HRS § 269-6(b).

E.

Conditions Of Approval

As discussed above, notwithstanding certain potential benefits that are described to result from the Project,

²⁸⁰Hawaiian Electric Response to CA/HECO-IR-20.

²⁸¹Hawaiian Electric Response to CA/HECO-IR-20.

²⁸²Application at 4, 12, and 18; Exhibit 5 at 12-13.

the Commission maintains numerous serious concerns, which it has previously conveyed to the Parties and Participant.²⁸³ Hawaiian Electric's responses to these concerns and subsequent replies to IRs not only fail to allay these concerns, but further underscore the fundamental shortcomings in its planning and lack of consideration for the additional costs and risks that Oahu customers will bear as a result. Consequently, as referenced above, the Commission imposes a number of conditions to approval of the ESPPA to ensure that the represented benefits of the Project are, in fact, received by customers, beyond merely the continuation of grid services following the retirement of the AES Hawaii coal plant.²⁸⁴ These conditions, noted frequently in the foregoing discussion, are described in detail, below:

Condition No. 1: Hawaiian Electric shall forgo any potential recovery of the second allocation of the PIM awards for the Stage 1 Oahu projects. Pursuant to Order No. 35224, issued in Docket No. 2017-0352, the Commission stated its intent to establish PIMs for procurement of the Stage 1 RFP projects, which were

²⁸³See Order No. 37721.

²⁸⁴Further, the supplemental IR responses submitted by Hawaiian Electric on April 23, 2021, suggest that certain assumptions made in the Application and earlier in this proceeding may be less certain than previously represented. Notwithstanding these updates, the conditions to approval established herein are designed to ensure that the promised Project benefits are realized and enjoyed by ratepayers.

contemplated to reward exceptional performance and encourage Hawaiian Electric to successfully execute the procurement process, resulting in low-cost renewable energy projects that deliver significant value to customers.²⁸⁵ The Commission further stated that “[t]hese incentives could include shared savings incentives or bonus payments for projects that beat certain price thresholds and achieve commercial operations on accelerated timeframes.”²⁸⁶

Subsequent to receiving comments from Hawaiian Electric and other stakeholders on potential PIM designs, the Commission established a shared-savings mechanism (“SSM”) for Stage 1 RFP projects by Order No. 35405, filed on April 6, 2018.²⁸⁷ The Commission later expanded the SSM to provide “an added incentive for the Companies to accelerate and increase the number of renewable projects to be selected during [the Stage 1] procurement in a timely manner[.]”²⁸⁸ In all, Hawaiian Electric

²⁸⁵In re Hawaiian Elec. Co., Inc., et al., Docket No. 2017-0352, Order No. 35224, “Providing Guidance on the Hawaiian Electric Companies’ Proposed Request for Proposals for Dispatchable and Renewable Generation,” filed on January 12, 2018 (“Order No. 35224”), at 37.

²⁸⁶Order No. 35224 at 37.

²⁸⁷Docket No. 2017-0352, Order No. 35405, “Establishing a Performance Incentive Mechanism for Procurement in Phase 1 of the Hawaiian Electric Companies’ Final Variable Requests for Proposals,” filed on April 6, 2018 (“Order No. 35405”), at 12.

²⁸⁸Docket No. 2017-0352, Order No. 35664, “Approving the Hawaiian Electric Companies’ Proposed Additional Performance Incentive Mechanism,” filed on September 6, 2018, at 6-7.

could be rewarded with incentives totaling up to \$6.5 million. The SSM does not, however, include any penalties for failure to successfully execute the procurement process.

This SSM was split into two allocations, with the first incentive awarded based on meeting specified timelines for submission of the PPAs for Commission review.²⁸⁹ The second incentive may be awarded after the first year of commercial operations of the Stage 1 RFP projects, prorated based on the amount of renewable energy actually utilized by the utility.²⁹⁰

Given the circumstances, the Commission believes that the second incentive of the SSM for Stage 1 projects on Oahu is not appropriate.²⁹¹ Specifically, given the significant delays in the four Oahu Stage 1 projects, substantial risk has now been conferred onto ratepayers, who are faced with potential generation and capacity shortfalls associated with these project delays, which could have mitigated capacity needs with adequate planning for the retirement of the AES coal plant. As a result of Hawaiian Electric's negligence in preparing for the retirement of the AES coal plant, including contingency plans, the Commission

²⁸⁹Order No. 35405 at 14.

²⁹⁰Order No. 35405 at 14.

²⁹¹This includes the projects that are the subject of Docket Nos. 2018-0431, -0434, -0435, and 2019-0050, respectively.

must undertake consequential action by imposing **Condition No. 1**, to address this transfer of risk to ratepayers.

While the Project offers a viable means to address the AES coal plant retirement, as noted above, the Project presents its own risks and impacts, such as the significant near-term costs to ratepayers, who must shoulder this financial burden during financially uncertain times associated with the COVID-19 pandemic. This result is directly at odds with the intent of the Stage 1 project PIMs, which were designed to reward exceptional performance in conducting the procurement and accelerate the timeline for bringing the Stage 1 projects online, which had the potential to offer notable ratepayer savings in the near term. Accordingly, given the existing commercial operations delays for these Stage 1 Oahu projects, providing a reward in the form of the second PIM allocation, would not be in the public interest.

Consequently, as a condition to approval, Hawaiian Electric shall forgo any potential recovery of the second allocation of the Stage 1 PIM awards for Oahu projects. Under the process previously approved by the Commission, Hawaiian Electric would seek to collect any second allocation of the Stage 1 project PIM award(s), based on the amount of renewable energy actually utilized by the utility from the Stage 1 projects after each projects' first year of operations, via its annual decoupling filing. Pursuant to the condition of approval described above,

Hawaiian Electric shall not incorporate any second allocation of the PIM award(s) for Stage 1 Oahu projects into any subsequent annual decoupling filing or other mechanism for adjusting target revenues.

Condition No. 2: Unlocking Grid Constraints and Aligning Demand-Side Programs with the Project. Based on the record, the Commission finds that the addition of the Project, combined with the retirement of the AES Hawaii coal plant, should significantly improve system-level hosting capacity for DER on Oahu.²⁹² This additional hosting capacity will allow more renewable energy to come online via customer-sited resources, further amplifying the benefits of the Project, which may be further improved by modifying program terms to facilitate more

²⁹²In support of this finding, the Commission notes that through the retirement of the AES Hawaii coal plant, the largest steam unit on Hawaiian Electric's grid with a relatively high minimum operating point: (1) Hawaiian Electric will require less reserve generation to address the potential situation of a sudden loss of the AES coal plant, as most of Hawaiian Electric's current reliability guidelines are based on mitigating this major potential disturbance; (2) the grid should have greater operational flexibility to operate at lower daytime minimum levels after retiring a relatively inflexible generator such as the large coal plant; (3) the FFR component of the Project will substantially improve system frequency response to contingency events, particularly generator trips, and reduce the impact to the grid of "legacy" DER systems that do not have current frequency ride-through functionality; and (4) the BESS will operate as a significant new load when it is charging and reduce grid stability concerns about reaching minimum operational constraints during periods of high renewable generation.

renewable energy production during the day when the Project will be charging. As a result, the Commission will require Hawaiian Electric to unlock grid constraints and align demand-side programs with the Project operations, including the following:

1. Removing requirements for energy storage on Phase 2 CBRE projects on Oahu (see Docket No. 2015-0389).

The Commission notes that in Decision and Order No. 37070, issued in Docket No. 2015-0389, the Commission encouraged, but did not require, storage for Phase 2 CBRE projects.²⁹³ Given the significant storage capacity that will be provided by the Project, the Commission notes that it is no longer necessary to prioritize CBRE projects paired with storage on the island of Oahu. Therefore, the Company should align any ongoing or future CBRE RFPs on Oahu with this guidance by, for example, removing any requirements for storage or weighting criteria that may favor projects paired with storage.

2. Expanding capacity in Phase 2 CBRE. Additionally, the Company should expand the available capacity for Phase 2 CBRE projects. With the additional capacity provided by the Project, there should be a corresponding ability to accommodate more

²⁹³In re Hawaiian Elec. Co., Inc., Hawaii Elec. Light Co., Inc., Maui Elec. Co., Ltd., and Kauai Island Util. Coop., Docket No. 2015-0389, Decision and Order No. 37070, filed on April 9, 2020, at 30.

CBRE projects. These projects are beneficial for a number of reasons, as outlined in Docket No. 2015-0389, and expansion of the program will allow more renewable energy to come online with which to charge the Project.

3. Removal of daytime export restrictions for existing and new DER programs under consideration in Docket No. 2019-0323 and related opportunities.²⁹⁴ Allowing daytime export from customer-sited renewable resources can help to ensure the BESS is being charged with renewable generation. With the availability of a standalone grid-scale BESS, the Commission will expect that removing restrictions on DER exports for both current and new utility programs to be the “default” position, including consideration of exports from DERs enrolled in Grid Service Purchase Agreements, in light of this new resource. Encouraging additional export of renewable energy during the day via programmatic incentives and lifting export restrictions will increase the Project’s benefits by encouraging greater adoption of such resources and reducing the overall level of fossil generation being used to charge the Project.²⁹⁵

²⁹⁴See generally, In re Pub. Util. Comm’n, Docket No. 2019-0323.

²⁹⁵The Commission notes that by adding new DER capacity and removing daytime export restrictions, distribution system upgrades on circuits with high penetration are likely to be necessary. Depending on the system needs, this could also require transmission infrastructure upgrades. For this reason, the Commission will

In addition, Docket No. 2019-0323 is exploring a number of other programs, including time-of-use rates, which are expected to provide a significant load shaping resource by providing price signals to customers to shift usage away from peak times, and Critical Peak Pricing, which can be used to address immediate or emergency need situations. The Company should expedite the implementation and enrollment of customers in time-varying pricing options by June 2022, to coincide with the capacity needs resulting from the scheduled AES coal plant retirement.

In addition, Oahu will continue to need new sources of generation, capacity, and energy efficiency to reduce the utilization of oil-fired generation to charge the Project. In Docket No. 2019-0323, stakeholders are working to address these near-term needs with an Emergency Demand Response program and new DER programs.²⁹⁶ The Commission is also working with Hawaii Energy to focus its program offerings in the next two years to facilitate retirement of the AES coal plant. The Commission expects Hawaiian Electric's unqualified support in fulfilling these needs

prioritize Oahu's "Grid Needs Assessment" study in the IGP docket, which is discussed further below.

²⁹⁶See generally, Docket No. 2019-0323 (involving a proceeding to investigate the technical, economic, and policy issues associated with DERs).

through demand-side measures and will not accept claims that the grid needs have been fully met through this Project.

The Commission notes that even with the significant improvements to system-level hosting capacity, localized, circuit-level constraints may exist. Hawaiian Electric has planned to review these in the Grid Needs Assessment conducted as part of the IGP process. As a result of the directive in this D&O to unlock grid constraints, the Commission is prioritizing the Grid Needs Assessment of the Oahu system, and a condition of this approval will be to update and submit this analysis within six months of the date of this decision. Hawaiian Electric shall collaborate with stakeholders in Docket No. 2018-0165, the IGP docket, to complete this update and file the analysis in both this docket and Docket No. 2018-0165.²⁹⁷ The Commission will track the Companies' implementation of solutions to the Oahu Grid Needs Assessment in the Annual Utilization Report, as specified in **Condition No. 7**, below.

If Hawaiian Electric is not making all reasonable efforts to facilitate and implement these actions by December 15, 2021, the Commission will review the progress and take action, as appropriate.

²⁹⁷See generally, In re Public Util. Comm'n, Docket No. 2018-0165.

Condition No. 3: Financial Retirement of Waiau and Kahe Units. The Commission determines that, to ensure long-term customer value from the Project, in combination with the significant amount of new renewable resources coming online in the next two years,²⁹⁸ firm dates for removing the costs associated with certain older fossil-fueled generation units from Hawaiian Electric's rates are necessary. This will ensure that customers are not required to pay for excess capacity from older fossil-fueled plants, as increasing amounts of new renewable resources come online. The specific units and timing are specified in the schedule below. In establishing this schedule, the Commission expects Hawaiian Electric will continue to seek new renewable resources to utilize the Project, while solidifying retirements of aging fossil-fueled plants on Oahu.

Financial Retirement Schedule

Fossil Fuel Unit	Deadline
Waiau Units 3 and 4	No later than December 31, 2023
Waiau Units 5 and 6	No later than December 31, 2026
Kahe Units 5 and 6 ²⁹⁹	No later than December 31, 2028

²⁹⁸The Commission expects to approve a suite of demand-side programs to provide additional sources of capacity reserves that support future retirement of fossil-fueled units. See Order No. 37721 at 18.

²⁹⁹While not previously offered by Hawaiian Electric as a mitigating action in response to Order No. 37721, the Commission notes that Hawaiian Electric previously stated its intention to

This retirement schedule is based on the resource plan filed in Exhibit 3, Attachment 1 of this Application.³⁰⁰ Consistent with the dates specified in this schedule, Hawaiian Electric will remove all costs associated with these units from its target revenues and make corresponding downward adjustments in the Company's Annual Revenue Adjustment filings for 2024, 2027, and 2029.³⁰¹

In light of Hawaiian Electric's recent filing that appears to suggest delays in the scheduled retirement for these plants, the Commission determines that it is particularly appropriate to set firm dates for the financial retirement of these plants, which should promote the transition away from aging, fossil-fueled generation units, and ensure that customers gain the Project's full value over the entire Term.³⁰²

retire Kahe Units 5 and 6 in 2028 and seeks to ensure such plans are executed. See Application, Exhibit 3 at Attachment 1. It is also notable that Hawaiian Electric's current planning assumptions through 2045 no longer include any plans for the retirement of Kahe Units 5 and 6, which further necessitates their inclusion in this condition. Response to PUC-HECO-IR-118, Attachment 1.

³⁰⁰Application, Exhibit 3, Attachment 1 at 2.

³⁰¹Hawaiian Electric also indicates the intent to establish regulatory assets to record the net book value of the retired assets and to amortize and recover these stranded costs. Hawaiian Electric Comments at 2, n.1. The Commission will review these requests as the units are taken out of service and make determinations as to the specific treatment based on the facts and circumstances at the time of the requests.

³⁰²The Commission is concerned that, since the planned retirements of Waiau 3 and 4 were previously anticipated for 2023,

Condition No. 4: Monthly reports on renewable generation utilization. Upon consideration of all available information, the Commission remains concerned about the anticipated utilization of the Project and the resulting analysis. The Commission finds that a Project of this scope should provide substantial contributions to the State's energy goals, deliver clear ratepayer benefits, and significantly impact the retirement timelines of non-renewable generation units.

Therefore, Hawaiian Electric shall file a monthly report with the Commission in this docket, copying the Consumer Advocate, within 30 days of the end of each full month from the Project's date of commercial operation, that provides details regarding the Project's renewable energy utilization for the month.³⁰³ This shall include, at a minimum: (1) the percentage of the energy stored in the Project that was generated by fossil fuels, compared to the percentage generated by renewable resources; (2) the average daily

Hawaiian Electric's commitment has now been delayed, not accelerated, by the addition of the Project. Compare Hawaiian Electric Comments at 2 with Application, Exhibit 3, Attachment 1 at 1.

³⁰³The Consumer Advocate similarly recommended that Hawaiian Electric be required to file an estimate of the average ratio of fossil fuel-to-renewable generation used to charge the Project. Consumer Advocate SOP at 42. Neither Hawaiian Electric nor Kapolei Energy Storage I objected to this proposed condition. Hawaiian Electric Reply SOP at 13; Kapolei Energy Storage I Reply SOP at 12.

energy capacity (expressed as a percentage of maximum capacity) by which the BESS was charged; and (3) the average daily energy capacity (expressed as a percentage of maximum capacity) by which the BESS was dispatched and/or utilized.³⁰⁴ In addition, information provided by the Annual Utilization Report, as discussed below, will be used to monitor the operation and dispatch of the Project.

Condition No. 5.: Minimum renewable utilization thresholds and prudence review. Related to Condition No. 4, to ensure that the Project delivers its purported benefits, the Commission establishes minimum thresholds of renewable utilization for the Project, as specified in the table below.

Project Duration	Minimum Renewable Threshold
0 - 2 years	At least 50% renewable utilization
2 - 5 years	At least 75% renewable utilization
5 years +	At least 90% renewable utilization

In any year that Hawaiian Electric's utilization of the Project falls below the established thresholds, an automatic

³⁰⁴Hawaiian Electric shall develop the format and content of the report in consultation with Commission staff. The Commission also notes that the statement in footnote 1 of PUC-HECO-IR-118, "[a] reasonable assumption can be made that the Project will be charged consistent with the approximate ratio of fossil fuel to renewable generation on the grid" is inconsistent with basic principles of least-cost economic dispatch of an electric power system.

prudence review of the fossil fuel costs incurred to charge the Project during this period will occur. The Commission will possess full discretion to disallow fossil fuel costs incurred to supply the Project during the applicable period, as well as to direct Hawaiian Electric to take appropriate corrective action(s), such as initiating additional renewable procurements, or addressing any grid constraints in order to increase renewable generation and utilization.

The Commission reiterates the importance of leveraging the Project to reduce the State's reliance on fossil-fueled generation and to maximize the benefits offered by large-scale energy storage. **Condition No. 4**, as detailed above, together with the other conditions herein, are intended to ensure that the Project meaningfully contributes to the State's energy goals, including the increased use of renewable energy resources, and delivers the associated benefits to ratepayers and the electric system as a whole.

In sum, the Commission believes the Project, if properly utilized, can provide important benefits to Hawaiian Electric's system. Having additional capacity on Hawaiian Electric's system will increase system reliability and grid stability in the event, for example, of a shutdown of one or more IPPs, such as the retirement of the AES coal plant in 2022. Furthermore, the dispatchable nature of the ESPPA will allow Hawaiian Electric

to “utilize renewable energy produced by other facilities interconnected to the Hawaiian Electric grid during periods of system demand”³⁰⁵ and will allow “the renewable energy generated elsewhere on the grid to be shifted to periods of peak energy demand, and other non-solar periods, that could otherwise require fossil generation to meet.”³⁰⁶ Additionally, the Commission recognizes that the BESS will provide FFR and “assist in grid stabilization subject to discharge limits.”³⁰⁷

As a result, the Commission finds that the nature of the ESPPA is reasonable and in the public interest, subject to several critical conditions, as discussed above. The Commission emphasizes that transparency around the utilization of the Project is paramount to demonstrating that the Project is in the public interest, and many of these conditions are designed to ensure that the Project delivers its promised benefits to customers and the grid in a timely and visible manner. In furtherance of these interests, and to ensure that the Project is utilized and dispatched in a transparent and unbiased manner, the Commission imposes the following, additional conditions.

³⁰⁵Application at 21.

³⁰⁶Application at 21.

³⁰⁷Application at 21.

Condition No. 6: Prohibition on Affiliate Relationships with the Project. Any relationship by an affiliate of Hawaiian Electric to the Project during the term of the ESPPA is strictly prohibited. The Affiliate Transaction Rules were established in Docket No. 2018-0065 to protect customers by ensuring that regulated entities, such as Hawaiian Electric, are not abusing market power or providing cross-subsidization with non-regulated affiliated organizations.

While Hawaiian Electric has not disclosed any proposed or established relationship between Hawaiian Electric and any of its affiliates or affiliate-related entities related to the Project, the Commission clarifies that any affiliate relationship related to the Project during the Term of the ESPPA is strictly prohibited. This restriction includes any affiliate-related entity relationships and receipt of any potential financing from Pacific Current or other affiliates. Violations of this condition will be addressed under Section IV.G of the Affiliate Transaction Requirements established in Docket No. 2018-0065, or as the Commission deems appropriate under the circumstances.

Condition No. 7: Additional Reporting Requirements.

To help maximize the avoidance of fossil fuel usage of the Project, the Commission has imposed **Condition Nos. 3, 4, and 5**, above, which will, among other things, promote the timely retirement of fossil fuel units, as well as allow the Commission to actively

monitor and analyze the Project's renewable utilization by requiring Hawaiian Electric to provide monthly updates related to operations of the system and whether the Project could have been operated differently to meet the identified objectives. The monthly updates should also include discussion of updates made to the operational guidelines based on lessons learned.³⁰⁸

In addition to the reporting requirements already established above, the Commission imposes the following reporting requirements on Hawaiian Electric to ensure that the Project is timely brought online and properly utilized to fulfill its expected near-term role.

Reporting of Missed Guaranteed Project Milestones.

The Consumer Advocate recommends that, due to concerns with the timely interconnection of projects, Hawaiian Electric should be required to report the reason for any missed Guaranteed Project Milestone, within 25 days of any such occurrence.³⁰⁹ Both Hawaiian Electric and Kapolei Energy Storage I have stated that they do not object to this condition.³¹⁰

³⁰⁸Consumer Advocate SOP at 42. The Consumer Advocate recommended that Hawaiian Electric be required to file periodic analyses to help ensure the Project is being utilized to maximize the best benefits to customers.

³⁰⁹Consumer Advocate SOP at 24-25 and 40.

³¹⁰Hawaiian Electric Reply SOP at 7; Kapolei Energy Storage I Reply SOP at 11-12.

The Commission agrees that information assessing why a Milestone was missed and steps taken to prevent future Milestones from being missed will be useful in monitoring the development of the Project. Accordingly, within 25 days of any missed Guaranteed Project Milestone, Hawaiian Electric shall file in this docket a report of: (1) the Milestone missed; (2) the reason(s) why the Milestone was missed; and (3) measures Hawaiian Electric believes will address the delay, including preventing similar delays for the same or other projects in the future.

Annual Utilization Report. Beginning with the first full calendar year following the in-service date of the Project, Hawaiian Electric shall file an Annual Utilization Report that includes the following: (1) quantification of the generation source charging the Project in each hour of the year; (2) co-optimization of the Project with other capacity resources, such as solar plus storage projects and grid services from DERs; (3) the number of events triggering the FFR resource, including description of each event (generation trip, etc.) and system frequency response after each event; (4) summary of actual curtailment data; and (5) reporting on metrics identified by the Commission to review performance in Condition No. 2, which requires Hawaiian Electric to unlock grid constraints and align demand-side programs with the Project.

The Annual Utilization Report shall be submitted on the same timeline as the annual revenue report filings for Hawaiian Electric established in Docket No. 2018-0088 (i.e., the initial Annual Utilization Report shall be due at the same time as the "Companies' Fall Revenue Report" (October 31), which will allow the Commission and Consumer Advocate the opportunity to review information prior to the end of the year and the final Annual Utilization Report shall be submitted on March 31 in alignment with several major filings in the PBR docket (Spring Revenue Report, Annual Pilot Update, Annual PIM and SSM Performance Review, and Annual RBA Review Transmittal)).

Condition No. 8: End-of-Life Management Plan.

Hawaiian Electric shall work with Kapolei Energy Storage I to submit an end-of-life management plan for the Project, which shall be due within five years of this D&O.

Condition No. 9: Return to Ratepayers of Daily Delay Damages. To the extent that DDDs are paid to Hawaiian Electric prior to commencement of the Lump Sum Payment, Hawaiian Electric shall credit the amount of the DDDs received to its ratepayers through the PPAC.

Based on the foregoing discussion, and subject to the conditions of approval established above, the Commission finds and concludes that Hawaiian Electric's purchased power arrangements under the ESPPA, pursuant to which Hawaiian Electric will dispatch

energy on an availability basis from Kapolei Energy Storage I and pay Lump Sum Payments to Kapolei Energy Storage, are prudent and in the public interest. Therefore, subject to the conditions discussed above, the Commission approves the ESPPA.

1.

Addressing the Consumer Advocate's Proposed Conditions

Regarding the other conditions recommended by the Consumer Advocate, the Commission finds as follows:

Requiring Kapolei Energy Storage I to file invoices related to the Project and its income statements or results of operations related to the ESPPA.³¹¹ In support of its proposal, the Consumer Advocate states that this information will assist the Commission and the Consumer Advocate "in evaluating the Project's actual results to the pro forma information consistent with prior Commission decision and orders (e.g., Decision and Order No. 33541, filed on February 19, 2016, in Docket No. 2015-0224)." ³¹² Hawaiian Electric does not object to this condition.³¹³ Kapolei Energy Storage I objects to this condition, citing, among

³¹¹Consumer Advocate SOP at 38-39.

³¹²Consumer Advocate SOP at 39.

³¹³Hawaiian Electric Reply SOP at 6.

other things, prior Commission orders declining to impose similar reporting conditions.³¹⁴

The Commission follows prior Commission D&Os addressing similar recommendations by the Consumer Advocate in the Phase 1 PPA dockets, where the Commission found that circumstances in the RDG PPA proceedings in Docket No. 2017-0352 are distinguishable from Docket No. 2015-0224 and older renewable PPA dockets.³¹⁵ In Docket No. 2015-0224, in support of its recommended condition, the Consumer Advocate referenced its concerns regarding the PPA's potential curtailment of renewable resources, such as the seniority curtailment provision.³¹⁶ The Consumer Advocate acknowledges the differences between the instant ESPPA and older renewable PPAs regarding the seniority curtailment provision, but continues to urge the Commission to impose this condition because it will "provide a comfort level with the proposed PPA pricing."³¹⁷

After considering the record as a whole, the Commission is not persuaded that the disclosure of the Project invoices and

³¹⁴Kapolei Energy Storage I Reply SOP at 5-8.

³¹⁵See, e.g., In re Hawaiian Elec. Co., Inc., Docket No. 2018-0431, Decision and Order No. 36236, filed on March 25, 2019 ("Order No. 36236") at 86-89.

³¹⁶See In re Maui Elec. Co., Ltd., Docket No. 2015-0224, "Division of Consumer Advocacy's Statement of Position," filed on December 17, 2015, at 20-24.

³¹⁷Consumer Advocate SOP at 39.

Kapolei Energy Storage I's income statements is warranted under these circumstances and, therefore, declines to adopt the Consumer Advocate's proposed condition.

Requiring bidders to file pro forma information in future procurement processes.³¹⁸ Hawaiian Electric agrees with this recommendation and notes that "the Companies planned to include such a requirement" for the Phase 2 RFPs.³¹⁹ The Commission, however, ordered Hawaiian Electric to omit this requirement in the final Phase 2 RFP.³²⁰

Kapolei Energy Storage I objects to this condition, citing, among other things, not only the Commission's rejection of this condition in both the Phase 1 and 2 RFPs, but also concerns with the disclosure of confidential commercial and financial information to Hawaiian Electric, which may result in a competitive disadvantage due to Hawaii Electric's role as a potential bidder in future RFPs under self-build option provisions.³²¹

The Commission observes that this proposal does not pertain to the Consumer Advocate's finding of overall reasonableness regarding the subject ESPPA. The Commission

³¹⁸Consumer Advocate SOP at 39.

³¹⁹Hawaiian Electric Reply SOP at 6.

³²⁰Hawaiian Electric Reply SOP at 7 (citing Order No. 35356 at 24-26).

³²¹Kapolei Energy Storage I Reply SOP at 5-6 and 10-11.

initially addressed this issue in Docket No. 2017-0352 but will re-examine it in future procurement processes.³²²

All completed environmental assessments that will be used to develop a detailed decommissioning plan and methodology be in place to determine if the land has been restored to its condition prior to the Project's development.³²³ Hawaiian Electric agrees with the intent of this proposed condition; however, it notes that a decommissioning plan has not yet been developed because "further assessment of the potential impacts to the land will continue to be refined throughout the [Project's] development, environmental study and permitting processes[.]"³²⁴ Kapolei Energy Storage I does not object to this recommendation, to the extent that it does not mean that it is required to "have environmental assessments to be used for the detailed decommissioning plan in place before construction, except to establish a baseline for the condition of the land prior to construction."³²⁵

³²²See Order No. 36356 at 25-26 (directing Hawaiian Electric to remove the requirement that bidders provide pro forma information as a requirement of Phase 2 RFPs).

³²³Consumer Advocate's SOP at 43.

³²⁴Hawaiian Electric Reply SOP at 14.

³²⁵Hawaiian Electric Reply SOP at 12-13.

The Commission notes that its **Condition No. 8** requires Hawaiian Electric to collaborate with Kapolei Energy Storage I to develop an end-of-life management plan for the Project, which will be submitted within five years of this D&O. In light of this requirement, which should include an assessment of how to restore the Project site to its pre-Project condition, the Commission does not believe that this separate condition is necessary. Rather, the Commission agrees with Hawaiian Electric and Kapolei Energy Storage I that the development of the end-of-life plan may be better served by waiting for Project completion, to ensure that the environmental assessments incorporate more accurate information.

Encouraging Sellers to offer live in-person and virtual testimony opportunities, with testimony being broadcast and recorded and public questions and comments transcribed, with regard to future outreach efforts. The Consumer Advocate recommends this condition to increase public accessibility and transparency.³²⁶ Hawaiian Electric did not object to this recommendation³²⁷ and Kapolei Energy Storage I took no position on the recommendation.³²⁸ It is unclear whether this condition is

³²⁶Consumer Advocate SOP at 43-44.

³²⁷Hawaiian Electric Reply SOP at 15.

³²⁸Kapolei Energy Storage I Reply SOP at 14.

specific to this proceeding or future developers and their projects. Additionally, Hawaiian Electric notes that it does not have control over how developers conduct outreach, save from such requirements under the RFP.³²⁹ As not specifically required under the current RFP, the Commission declines to adopt this as a specific condition, but will reexamine the matter in future procurement processes. However, as noted above, the Commission expects Kapolei Energy Storage I to continue its community outreach efforts, and encourages it to take this recommendation into consideration and to make every effort to support a broad range of opportunities to inform and engage the community.

The issues discussed in the Consumer Advocate's SOP, Attachment 1, on pages 34 and 35, should be reserved for future RFPs.³³⁰ Hawaiian Electric states that it "will work on addressing the two issues discussed on pages 34 and 35 of Attachment 1 of the Consumer Advocate's SOP for any subsequent all-resource RFPs."³³¹ The Commission agrees that Hawaiian Electric should work with the Commission and the Consumer Advocate in addressing concerns and recommendations by the IO regarding its review of the Phase 2 RFP procurement process. As it has done in prior phases of the RFPs in

³²⁹Hawaiian Electric Reply SOP at 15.

³³⁰Consumer Advocate SOP at 44.

³³¹Hawaiian Electric Reply SOP at 16.

Docket No. 2017-0352,³³² the Commission intends to provide additional guidance for future RFP phases as needed, taking into consideration the recommendations from the IO and the Parties and Participants of Docket No. 2017-0352.

The Commission, however, observes that this proposal is prospective in nature and does not pertain to the Consumer Advocate's finding of overall reasonableness regarding the subject ESPPA. Accordingly, the Commission declines to adopt this as a specific condition of approval to the ESPPA.

F.

Recovery Of ESPPA-Related Non-Energy Payments Through The PPAC

Given the Commission's approval of the ESPPA, the Commission likewise approves Hawaiian Electric's request to recover the ESPPA's non-energy payments, including the Lump Sum Payments and related revenue taxes, through the PPAC, to the extent that such costs are not included in base rates. This is consistent with HAR § 6-60-6(2), which authorizes the pass through of purchased energy charges through an electric utility's PPAC and HRS § 269-16.22, which requires the pass through of power purchase costs through an automatic adjustment surcharge.

³³²See Order No. 35524 and Order No. 36356.

However, as discussed above as **Condition No. 9**, the Commission conditions approval of recovery of the energy and non-energy payments under the PPA through the PPAC, as follows:

1. As discussed above, in Section III.C.5., to the extent DDDs, Termination Damages, or other revenues or benefits are paid to Hawaiian Electric, such revenues or benefits paid to Hawaiian Electric shall be returned to its ratepayers through the PPAC; and

2. Recovery of the Lump Sum Payment through the PPAC shall be limited to the Lump Sum Payment net of Force Majeure adjustments or any offset due to Liquidated Damages.

G.

Accounting And Ratemaking Treatment For
Purchase Power Expenses Under The ESPPA

Hawaiian Electric's preliminary evaluation indicates that the ESPPA contains a lease under FASB ASC 842.³³³ Accordingly, Hawaiian Electric will record the right-of-use asset and lease liability on its financial statements for the present value of the fixed payments attributable to the Project over the term of the ESPPA.³³⁴ Under the U.S. Generally Accepted Accounting Principles,

³³³Application at 26.

³³⁴Application at 26.

treatment differs depending on whether the lease is a financing or operating lease.³³⁵ However, for ratemaking purposes, Hawaiian Electric requests that the ESPPA payments be recorded as a purchase power expense, with the difference between the actual payments and lease expense being reflected as a regulatory asset/liability for the term of the ESPPA.³³⁶

The Consumer Advocate does not object to the proposed ratemaking treatment, based on the fact that such treatment is consistent with prior approved PPAs.³³⁷ The Commission concurs and approves such treatment; provided that, should Hawaiian Electric determine that the ESPPA does not contain a lease, Hawaiian Electric will report such change to the Commission and the Consumer Advocate.

H.

Remainder Of The Proceeding

As noted above, Hawaiian Electric requested that the Commission issue two decisions and orders in this docket, the first decision approving the ESPPA-related requests, which is the subject of the Commission's discussion, above, and the second

³³⁵Application at 27.

³³⁶Application at 27.

³³⁷Consumer Advocate SOP at 46.

decision approving the interconnection-related requests. Pursuant to Order No. 37427, the Commission bifurcated Hawaiian Electric's ESPPA-related requests from its interconnection-related requests.³³⁸

Regarding its interconnection-related requests, the IRS was not completed as of the filing of the Application nor the filing of the request for approval of the overhead transmission line.³³⁹ However, "the Parties agreed to execute the ESPPA prior to the completion of the IRS for the Project" in order to meet the guaranteed commercial operations date to replace the AES Hawaii coal plant.³⁴⁰ Hawaiian Electric has stated that it will file an amendment to the ESPPA based on the IRS results.³⁴¹

The Commission observes that Hawaiian Electric anticipates completing the IRS "in the second quarter of 2021, with the ESPPA Amendment Deadline being the sixtieth day following the date of the completed IRS[.]"³⁴² Thus, it appears that the IRS has been or should be completed in the very near-term, and the Commission urges Hawaiian Electric to expedite its amendment

³³⁸Order No. 37427 at 15.

³³⁹See Hawaiian Electric's Overhead Line Request at 1.

³⁴⁰Application at 22.

³⁴¹Application at 22.

³⁴²Hawaiian Electric's Overhead Line Request at 1.

discussions with Kapolei Energy Storage I, to the extent a decision addressing the Interconnection-Related Requests is desired soon.

In response to Hawaiian Electric's Overhead Line Request, the Commission clarifies that it intends to address the Interconnection-Related Requests by subsequent order.

IV.

SUMMARY OF FINDINGS OF FACT AND CONCLUSIONS OF LAW

Based on the foregoing and requisite on the conditions imposed in this D&O, the Commission finds:

1. Hawaiian Electric has met its burden of proof in support of its request for approval of the ESPPA between Hawaiian Electric and Kapolei Energy Storage I, dated September 11, 2020. In support thereof, the Commission further finds:

A. The purchased power arrangements under the ESPPA, pursuant to which Hawaiian Electric will dispatch energy on an availability basis from Kapolei Energy Storage I, including the Lump Sum Payment to be paid to Kapolei Energy Storage I, are reasonable and in the public interest;

2. Hawaiian Electric has met its burden of proof in support of its request to include all non-energy payments under the ESPPA, including the Lump Sum Payment and related revenue taxes, through the PPAC, to the extent such costs are not included in base rates;

3. Hawaiian Electric has met its burden of proof in support of its request to approve the proposed accounting and ratemaking treatment for the purchased power expenses under the ESPPA; and

4. To ensure that the Project supports the State's energy policies, as well as accountability and transparency, the Commission's approval is predicated on the imposition of several conditions on Hawaiian Electric and Kapolei Energy Storage I, as described above in Section III.E.

V.

ORDERS

THE COMMISSION ORDERS:

1. Subject to the conditions set forth above, and as summarized in Section III.E., the Commission approves:

A. The ESPPA between Hawaiian Electric and Kapolei Energy Storage I, dated September 11, 2020;

B. Hawaiian Electric's request to include all non-energy payments under the ESPPA, including the

Lump Sum Payments (as defined in the ESPPA) and related revenue taxes, through the PPAC, to the extent such costs are not included in base rates; and

C. Hawaiian Electric's request to approve accounting and ratemaking treatment for the purchased power expenses under the ESPPA; and

2. The Commission will address Hawaiian Electric's Interconnection-Related Requests by subsequent order.

DONE at Honolulu, Hawaii APRIL 29, 2021.

PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

By James P. Griffin
James P. Griffin, Chair

By Jennifer M. Potter
Jennifer M. Potter, Commissioner

By Leodoloff R. Asuncion, Jr.
Leodoloff R. Asuncion, Jr., Commissioner

APPROVED AS TO FORM:

Keira Y. Kamiya
Keira Y. Kamiya
Commission Counsel

2020-0136.ljk

CERTIFICATE OF SERVICE

Pursuant to Order No. 37043, the foregoing Order was served on the date it was uploaded to the Public Utilities Commission's Document Management System and served through the Document Management System's electronic Distribution List.

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COMMISSION

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